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Reflections on Editing the Journal: Current Status and Future Directions

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ABSTRACT

With the ongoing COVID-19 pandemic, we are facing another watershed moment for our field. There truly could not be a better time to be editing an open-access journal for the international community of risk and crisis communication scholars and practitioners. In this essay, we provide an update on the Journal's status in terms of acceptance rates, global perspective, and readership rates.

KEYWORDS: risk, crisis, communication

The September 11 terrorist attacks first drew my attention to the importance of risk and crisis communication research, and my interest was crystallized while collecting my dissertation data on government crisis communication for special needs populations during Hurricane Katrina. With the ongoing COVID-19 pandemic, we are facing another watershed moment for our field. There truly could not be a better time to be editing an open-access journal for the international community of risk and crisis communication scholars and practitioners. As I end my 2-year editorial term, I am proud of what we have accomplished and am eager for the Journal's continued growth. In this essay, my editorial assistant and I provide an update on the Journal's status in terms of acceptance rates, global perspective, and readership rates.

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Acceptance Rate and Review Timeframe

During the past 2 years, the Journal has witnessed growth in submissions as well as continued to establish itself as a premiere outlet for risk and crisis communication scholarship. From March 2018 to March 2020, 88 manuscripts were submitted. Thirty manuscripts were accepted, whereas 39 were rejected. Fourteen manuscripts were withdrawn either because of poor fit with the Journal or the authors declined to revise and resubmit their research. As such, the Journal had a 34% acceptance rate during these 2 years. As of March 31, 2020, five articles submitted were still under review. Of the manuscripts that received “revise and resubmit” decisions, 63% were then accepted to the Journal and 27% were rejected over the past 2 years. At the time we wrote this essay, 10% of manuscripts that received revise and resubmit decisions had not yet been resubmitted.

The editorial team has taken strides to reduce turnaround time for manuscripts submitted during the past 2 years. The mean and medium review times are less than 60 days. We appreciate the Editorial Board’s many contributions to the Journal, most especially their timely and constructive reviews.

Global Perspective

The Journal is dedicated to human and mediated communication issues associated with crises, risks, and emergencies around the world. Our emphasis on the international is reflected in our global editorial board and represented by the authors and articles we publish. In the past 2 years, author institutions of accepted articles have come from Australia, Belgium, the Netherlands, Sweden, the United Kingdom, and the United States. Furthermore, articles have examined the communication surrounding crises and risks around the world. Scholars have analyzed cases and sites in Australia, Cyprus, England, Estonia, Finland, France, Germany, Greece, Japan, Puerto Rico, South Korea, and the United States. Beyond representing authors and contexts on a global scale, articles published in the Journal have been downloaded around the world. The top 10 countries from which articles are downloaded are ranked as follows:

1. United States
2. United Kingdom
3. Netherlands
4. Australia
5. Malaysia
6. Canada
7. India
8. Germany
9. Indonesia
10. France

In author institutions, article sites, and dissemination of articles, the Journal truly encapsulates its international mission, helping to share knowledge and research on crises and risks at the global level. We encourage additional submissions from researchers from around the world.

Growing Readership

The dissemination of the Journal and its articles has continued to grow. In the past 2 years, there have been 12,058 downloads. The majority of downloads come from educational institutions (74%) followed by commercial institutions (18%). Government institutions (3%) and other/nondescript organizations (5%) make up the remaining percentage of downloads. The top five downloaded articles are Benoit (2018) at 5,152 downloads, Alsulaiman and Rentner (2018) at 501 downloads, Novak et al. (2019) at 460 downloads, Sellnow et al. (2019) at 453 downloads, and Sellnow-Richmond et al. (2018) at 428 downloads. As an open access journal, we are fundamentally driven by the purpose of spreading crisis and risk communication knowledge around the globe.

Future Directions

In this essay, we have demonstrated the growing stature and reach of the Journal. The Journal also remains nimble and responsive to the defining crises of our time, including the [special call for research on COVID-19](#). There are opportunities for continued growth in terms of publishing more research from diverse locations around the globe and reaching more nonacademic institutions. As the

world's attention remains on the COVID-19 pandemic, we must rise to the challenge of disseminating research that can support responses to this crisis and the ones that we will face in the future. It has been an honor to edit this Journal, and we thank the entire editorial team for their service.

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References

- Alsulaiman, S. A., & Rentner, T. L. (2018). The health belief model and preventive measures: A study of the ministry of health campaign on coronavirus in Saudi Arabia. *Journal of International Crisis and Risk Communication Research*, 1(1), 27–56. <https://doi.org/10.30658/jicrcr.1.1.3>
- Benoit, W. L. (2018). Crisis and image repair at United Airlines: Fly the unfriendly skies. *Journal of International Crisis and Risk Communication Research*, 1(1), 11–26. <https://doi.org/10.30658/jicrcr.1.1.2>
- Novak, J. M., Day, A. M., Sopory, P., Wilkins, L., Padgett, D. R., Eckert, S., Noyes, J., Allen, T., Alexander, N., Vanderford, M., & Gamhewage, G. (2019). Engaging communities in emergency risk and crisis communication: A systematic review and evidence synthesis. *Journal of International Crisis and Risk Communication Research*, 2(1), 61–96. <https://doi.org/10.30658/jicrcr.2.1.4>
- Sellnow, T. L., Parrish, A., & Semenas, L. (2019). From hoax as crisis to crisis as hoax: Fake news and information disorder as disruptions to the discourse of renewal. *Journal of International Crisis and Risk Communication Research*, 2(1), 121–142. <https://doi.org/10.30658/jicrcr.2.1.6>
- Sellnow-Richmond, D. D., George, A. M., & Sellnow D. D. (2018). An IDEA model analysis of instructional risk communication in the time of Ebola. *Journal of International Crisis and Risk Communication Research*, 1(1), 135–166. <https://doi.org/10.30658/jicrcr.1.1.7>



Gender and Presence of Children: Examining Media Uses, Informational Needs, and Source Preferences during the Flint, Michigan, Water Crisis


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ABSTRACT

In 2014, a water crisis emerged in Flint, Michigan. Using uses and gratifications theory as the guiding framework, this study examines if crisis-related media uses, informational needs, and source preferences are related to respondents' gender and/or whether or not respondents had children. A random sample of 208 Flint residents yielded results that are largely consistent with extant research, although minor nuances were found. Media uses, preferred informational sources, and desire to receive future crisis-related health information varied between women and men. Women reported significantly higher use of Facebook and Instagram. However, there were *not* significant differences between genders or respondents with/without children regarding their future informational needs about crisis-related health topics. Results are discussed in relation to extant research, theory, and praxis. Limitations and future research are also discussed.

KEYWORDS: children, crisis communication, gender, informational needs, media use

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In April of 2014, the Municipal Water Department of Flint, Michigan, changed its water source from the treated water of the Detroit Water and Sewerage Department (DWSD) to the untreated water of the Flint River. Almost immediately there were issues with the water, resulting in several boil water advisories. For instance, fecal coliform bacterium was detected in August 2014 and total coliform bacteria in September 2014 (CNN, 2016). These bacteria are warning signs that can indicate the presence of *E. coli* and other disease-causing organisms (CNN, 2016). Furthermore, the Flint River water was highly corrosive and was not treated properly as anti-corrosion chemicals were not added to the water. The protective sedimentary layers of the water distribution system, known as the passivation layers, quickly dissolved (Masten et al., 2016). Subsequently, direct contact with both iron and lead pipes produced a variety of water contamination problems. Residents were exposed to a number of health threats including high levels of lead and disinfection by-products as well as bacterial contamination. Simultaneously, Flint experienced an outbreak of Legionnaires disease that was associated with the water (Masten et al., 2016). Although concerns about the water were expressed by Flint residents *and* independent researchers at the onset of the water switch, government officials were extremely slow to respond and some were accused of withholding information from the public (CNN, 2016; Gable & Buehler, 2017; Krings et al., 2019).

The City of Flint did not declare a state of emergency until December 2015. Genesee County and the State of Michigan followed suit with declarations of emergency in January 2016 (City of Flint, n.d.). However, by this time, the public had lost trust in government officials due to their slow response and overassurance about the water quality (CNN, 2016; Cuthbertson et al., 2016; Krings et al., 2019). The Flint Water Advisory Task Force (2016) concluded that, "The Flint water crisis is a story of government failure, intransigence, unpreparedness, delay, inaction, and environmental injustice," (n.p.). The crisis in Flint was further exacerbated by poor communication from public officials. As such, it is important to understand how communication processes functioned in this case, how affected residents used communication,

and how information seeking and media use varied among affected residents. Such understanding may shed light on the (in)effectiveness of communication strategies and inform theory and praxis.

This research queries the media uses, informational needs, and source preferences of Flint residents impacted by the city's water crisis. Specifically, gender and whether or not respondents had children are the central variables of focus. Lead—the principle contaminate in the Flint water crisis case—has a disproportional impact on the development of young children (Bellinger, 2016; Hanna-Attisha et al., 2016). For this reason, whether or not respondents had children was an important variable to consider for this research. To further elucidate the context of this research, a review of relevant literature is provided, which includes details on the grounding theoretical framework and presentation of hypotheses and research questions. Then, details of the methods are provided, followed by presentation of results. Based on the results, a discussion of theoretical and praxis-based implications follows. An acknowledgment of limitations concludes the paper.

Literature Review

Communication processes are instrumental during a crisis. They are used to manage emerging and ongoing threats and uncertainty, and educate the public about necessary protective actions (Sellnow & Seeger, 2013). Uncertainty can prompt information seeking behaviors, which are influenced by specific needs, especially during a crisis (Brashers et al., 2000). The public will typically seek crisis information from a variety of sources and will continue to do so throughout the crisis life cycle (e.g., Lai & Tang, 2018; Sellnow & Seeger, 2013; Sjöberg, 2018; Sommerfeldt, 2015). Prominent sources of information often include legacy mass media, social media, and interpersonal networks.

Numerous media types serve as sources of information during crises. Traditionally, legacy mass media have been primary sources of information surrounding crises and, in most cases, are considered valuable and timely sources of information (Park & Avery,

2018; Parmer et al., 2016; Savoia et al., 2017). In addition, social media—such as Facebook and Twitter—have emerged as important, flexible, and targeted channels for crisis communication (Eriksson & Olsson, 2016; Lin et al., 2016; Veil et al., 2011). As one may deduce, there are various perspectives on the utility and function of different media for crisis communication. One perspective suggests that “medium effects are stronger than the effects of crisis type,” on publics (Utz et al., 2013, p. 40). This claim warrants further investigation, especially because there are many other factors that influence publics’ media use and information seeking. For instance, the perceived credibility of informational sources during a crisis is imperative to consider, alongside medium effects and crisis type.

Perceived credibility of informational sources and media channels are important to consider in crisis contexts. Traditionally, legacy mass media have been perceived as more credible channels and sources of information during crises (Austin et al., 2012). Mass media sources, like major news outlets, often utilize eyewitnesses who provide viewers with recent, “front line” information during adverse events like crises (Westerman et al., 2014, p. 172). Recency of crisis-related information also impacts perceived source credibility, especially on social media (Westerman et al., 2014). Simply put, perceived source credibility is a key determinant in source evaluation for both legacy mass media and social media (Van Zoonen & van der Meer, 2015). In the context of the Flint water crisis, credibility of governmental sources may have been diminished due to slow response time and residents feeling as though their concerns about the water were ignored by governmental officials (Cuthbertson et al., 2016; Krings et al., 2019). Due to Flint’s unique crisis context and information environment, the perceived credibility of information forms (e.g., mass media, social media) and informational sources may have influenced residents to utilize new and/or different media or informational sources (e.g., Austin et al., 2012). As both legacy mass media and social media have been purported as channels that crisis-affected individuals utilize to gratify crisis-related informational needs, uses and gratifications theory is a relevant framework for this research.

Theoretical Framework

Uses and gratifications theory (UGT) is an applicable framework for examining media uses and informational needs during crises. According to UGT, audiences actively use media and seek information to become better informed about a particular topic or event, to identify with others in the situation, to entertain oneself, to enhance social interaction and/or, to escape or relieve stress (Katz, Blumler, & Gurevitch, 1974). As may be evident, UGT is based on the user's perspective and acknowledges that people consider their media uses based on awareness of their needs *and* the expectation that certain media will gratify those needs (Ruggiero, 2000). In essence, UGT focuses on "what people do with media" and suggests that media use is linked to personal identities (Blumler, 1979; Katz, Blumler, & Gurevitch, 1974), which may influence individuals' desired gratifications during a crisis. Media use may help crisis-affected individuals achieve multiple gratifications. For example, decreasing uncertainty and becoming better informed about the crisis event or associated health risks are two possible gratifications that can result from active, intentional media use(s) during crises (Houston et al., 2015; Lev-On, 2012; Macias et al., 2009). In using media to gratify crisis-related informational needs, users may perceive certain media to be more useful than others and, in this way, UGT posits that media compete with one another.

Media compete with other sources that help individuals fulfill their desired gratifications (Katz, Haas, & Gurevitch, 1973). When certain media or informational sources (i.e., government officials) do not help individuals gratify their needs, they may turn to alternative media and seek information from other sources (Katz, Haas, & Gurevitch, 1973). These (alternative) media uses can help individuals make informed decisions in crisis contexts. However, there is wide variation in publics' media use and informational needs during crises, which is why it is essential to empirically query *crisis-affected* publics' media uses and desired gratifications (e.g., Lachlan, Spence, & Seeger, 2009; Lu, 2018; Spence, Lachlan, & Griffin, 2007). Specifically, UGT suggests that individuals may receive, interpret, and use media in different ways depending on *their* specific needs and desired gratifications, which can be impacted by personal characteristics, demographic variables, identities, past

experiences, and so forth (Day et al., 2019; McQuail, 1984; Ruggiero, 2000). Gender is one variable that may impact media uses, informational needs, and desired gratifications. Extant research has highlighted differences among genders regarding media uses and informational needs in crisis contexts.

Gender and Crises

Gender can influence information seeking during crises (Seeger et al., 2002; Spence, Lachlan, & Burke, 2007, 2011; Spence et al., 2005). However, most extant research on gender and crises presents gender in a binary fashion, highlighting differences between women and men in their needs and responses (e.g., Lachlan, Spence, & Nelson, 2010). While there is a need to diversify the approach toward gender within crisis communication research and it is important to note the limitations that exist with a binary conceptualization, useful and applicable knowledge has been derived from previous studies that have employed such conceptualization. For example, extant research suggests that women are more inclined to seek out information during a crisis (Lachlan, Spence, & Seeger, 2009; Spence et al., 2008, 2011), perhaps because information seeking can function as a coping strategy for women during crises (Spence, Lachlan, & Burke, 2007). During crises, women may also “translate a relational orientation (i.e., concern for relationships) into a problem-solving orientation (i.e., ‘what information do I need to minimize the harm to my family’),” a process that is facilitated through information seeking (Burke et al., 2010, p. 34). Based on such findings, the following hypothesis (H) for this research is forwarded:

H1: Women are more likely than men to seek information about the Flint water crisis.

The type of information that women and men seek during a crisis also varies. In past crisis events, women have placed greater importance on information concerning specific mitigation resources and strategies, such as food and water resources, evacuation options, shelters, rescue efforts, the larger impact of the

crisis, connecting with friends and family, and locating healthcare or medicine (Seeger et al., 2002; Spence, Lachlan, & Burke, 2007; Spence et al., 2005). Women appear to be more concerned with socially positive responsibilities during crises, such as food and water distribution and shelter (Spence, Lachlan, & Burke, 2011). Men tend to place greater importance on issues related to crisis response and understanding the scope of the damage (Spence et al., 2011). These differences may be better explained through gender-related social roles and activities.

Social roles and activities, as well as culture and environmental upbringing, may help explain the impact of gender on risk perception and subsequent informational needs and media use (Gustafson, 1998; Peek & Fothergill, 2008). This notion is important to consider in crisis communication because risk perception can impact desired gratifications and subsequent media uses. Take, for example, Fothergill's (2004) finding that women generally view crisis warning messages as more credible, which may heighten their willingness to enact protective behaviors. It is possible that women's reception of warning messages and willingness to enact protective actions *could* be influenced by gender-related social roles and activities they fulfill. Women are often considered principle caregivers that are concerned about health-related issues and/or concerned about caring for the sick or injured (Enarson et al., 2006; Fothergill, 1999; Halvorson, 2004), which may influence their informational needs and subsequent media uses. Slow-moving water-related crises, like the Flint water crisis, often put "women's and children's health at risk and greatly expands the demands on mothers to keep children well," (Enarson et al., 2006, p. 136; also see Halvorson, 2004). Thus, gender may influence risk perception and subsequent informational needs and media uses during crises, which may be especially applicable to the Flint water crisis.

In Flint, 44% of children live in single-parent households and over 80% of all births in the city are to women who are not married (County Health Rankings, 2019; Mack, 2017). Additionally, "in Flint, the most common family type with children was that of a Female householder, with no spouse present (55.3 percent), while

the most common structure with children in the state [of Michigan] is the married-couple type with 65.4 percent," (Murembya & Guthrie, 2016, p. 10). Noting these statistics alongside Spence et al. (2008) suggestion that women's heightened relational orientation may evoke a problem-solving orientation that prompts information seeking during crises (previously mentioned in reference to H1) and the possibility that women are principle caregivers concerned about health (Enarson et al., 2006; Fothergill, 1999; Halvorson, 2004), it is possible that women in Flint may be more interested in health-related information than men. To further query the possible differences between women and men in terms of their crisis-related informational needs related to health, the following hypothesis is proposed:

H2: Women are more interested in gaining additional health-related information surrounding the Flint water crisis than men.

Research has noted differences in internet use between women and men during crises. Women have reported television, print media, and radio as more useful media during crises, while men have reported internet to be more useful (Lachlan, Spence, & Seeger, 2009; Spence et al., 2006). In contrast, women affected by Hurricane Katrina valued online expressive communication more than men (Procopio & Procopio, 2007). Specifically, women sought out information about family members, shared information with family and friends, and received emotional support through internet use (Procopio & Procopio, 2007). Thus, women's internet use in the context of Katrina was not *solely* to retrieve information about the disaster. Drawing from these findings, the following hypothesis is proposed:

H3: Men are more likely than women to want continued information about the Flint water crisis through internet sources.

Research regarding gender and social media use during crises is a growing area of scholarship. A study of Chinese internet users reported that women are more likely to utilize social media to communicate during a public emergency event than men (Xie et al., 2017). Similarly, women affected by Hurricane Sandy were

more inclined to seek information through Facebook than men (Hamama-Raz et al., 2015). Although hurricanes and Flint's crisis are different types of crises, they share attributes that are typical to most crises, such as evoking high levels of uncertainty, violating expectations, threatening goals and well-being, and each require a rapid response to mitigate harm (Sellnow & Seeger, 2013). However, "there are still many aspects of social media usage in crisis that are not adequately understood. One of these is the influence of gender on perception, attitudes and behaviour regarding usage of the new media," (Alexander, 2014, p. 730). Due to the lack of congruent research on gender and social media use *for information seeking* (rather than social support, for example) in human-caused crisis events, we propose the following research question (RQ):

RQ1: How do women and men report using social media for accessing information about the Flint water crisis?

Children and Crises

Individuals with children may exhibit different patterns of media use during crises than individuals without children (Hipper et al., 2018). Presence of children can also impact media use and preferred informational sources of caretakers/guardians/parents (hereby referred to as "parents"), which can vary depending on family characteristics. For example, parents of children with special healthcare needs prefer information from healthcare professionals, school personnel, and local government officials via in-person meetings, integrated in-person and online forums, or text messages and social media during emergencies (Hipper et al., 2018). Crisis type can also impact parents' information seeking and media use. During a terrorist attack, for example, parents have sought information from interpersonal networks and utilized social relationships to help them understand the crisis, gather information, and seek support (Rickwood et al., 2005; Tatar et al., 2011).

An important caveat related to the informational needs of parents is that they must first be *aware* of and understand their crisis-related informational needs (Archibald et al., 2015). Such

awareness and understanding is imperative during a crisis, especially for parents, because the effects of crises on children can be serious and, thus, may increase parents' desire to seek out crisis-related information. Children are more prone to experience psychological damage, post-traumatic stress disorder (PTSD), hindered development, and higher levels of fear and anxiety during and after a crisis (Abdeen et al., 2008; Allen et al., 2007; Martin, 2010). When considering the context of the Flint water crisis, it is important to understand children's increased vulnerability to lead due to "their greater fractional absorption of ingested lead and greater intake on a body-weight basis and because development of the central nervous system is easily derailed in ways that result in cognitive and behavioral abnormalities," (Bellinger, 2016, p. 1102). Therefore, the Flint water crisis had a disproportional impact on children (Hanna-Attisha et al., 2016), which may have heightened parents' risk perception, media use, and information seeking. For these reasons, the fourth hypothesis is proposed:

H4: Respondents with children will express higher levels of informational needs than respondents without children.

Although children may heighten parents' informational needs, desired gratifications, and subsequent media uses, they may also serve as positive facilitators to information seeking during crises. Public agencies' framing of crisis communication can also influence information seeking (Sjöberg, 2018). Overall, extant research posits that a range of media logics are used by parents to seek crisis-related information, which influences their expectations and evaluations of media and received crisis communication (Hipper et al., 2018; Sjöberg, 2018). In noting such findings, it is also important to recall that 44% of children in Flint live in single-parent households and the most common family type with children is female-headed households with no spouse present (55.3%) (County Health Rankings, 2019; Mack, 2017; Murembya & Guthrie, 2016). As such, we present the follow RQ:

RQ2: How do women without children, women with children, men with children, and men without children differ in their informational needs and patterns of media use?

In sum, this investigation of media uses, informational needs, and source preferences is set within the context of the Flint, Michigan, water crisis. Specifically, gender and whether or not respondents had children are queried as related to media uses, informational needs, and source preferences. Such phenomena are important to consider to ensure the relevancy of and accurate placement of crisis communication. Relevancy and accurate placement are important criteria for supporting core functions of crisis communication and meeting the informational needs of affected populations—especially vulnerable populations, like women and children with low socioeconomic status (Spence & Lachlan, 2016). Such populations are omnipresent in Flint (County Health Rankings, 2019; Mack, 2017; Murembya & Guthrie, 2016; U.S. Census Bureau, n.d.; U.S. Census Bureau, 2010).

Methods

Data were collected using a version of the Media Uses and Informational Sources survey. The survey was adapted to match the research setting; however, the scales and basis of the questions were not modified (see other uses of the measure in Day et al., 2019; Lachlan, Spence, & Seeger, 2009; Spence et al., 2006; Spence, Lachlan, & Griffin, 2007). The survey is grounded in UGT and media dependency theory, and designed to assess media uses and informational needs related to crisis events. Using five-point scales ranging from “strongly agree” to “strongly disagree,” respondents’ (1) feelings about the crisis, (2) current information gaps surrounding the crisis, and (3) desire to receive additional information about specific crisis-related topics were assessed. Reliability analyses yielded coefficients (Cronbach’s alpha) of 0.786, 0.927, and 0.953 for the scales, respectively. Another five-point scale ranging from “never” to “always” was used to record where respondents got information about important events in the Flint community, which yielded an alpha coefficient of 0.637. The lower alpha for this scale may be due to poor interrelatedness of the items when considering the context of this study (Tavakol & Dennick, 2011), as sources of information included various types

of traditional media, social media, and personal networks versus types of sources for only one medium per scale.

Once Institutional Review Board approval was granted, data collection began. Researchers used a random table of numbers (RTN) to select respondents for participation. Computer-generated, printed copies of RTNs were used to approach potential respondents. For example, a starting point was randomly identified for each point of data collection. If the first number in the identified RTN sequence was "7," the seventh individual that came through the water distribution site was asked if they were willing to complete a survey. Surveys were collected from June to November of 2016. Between June to August, collection occurred approximately twice per week and decreased to every other week between September and November as weather conditions and scheduling became more complicated during these months. Respondents were approached at the Flint Farmer's Market (June only) and at state-operated bottled water Points of Distribution (June through November). These locations were selected as points of data collection largely due to these locations affording access to the target population and permitting the researchers' presence.

A sample of 210 Flint residents was collected. However, only 208 surveys were usable as two respondents did not indicate their age on the survey. Respondents had to be 18 years of age or older to participate. Most respondents took the survey on their own. A small number of respondents (< 10) asked one of the researchers to read them the survey questions and record their answers. Less than 35 individuals that were approached declined to participate, most did not provide an explanation for their declination; however, at least two individuals at the bottled water Points of Distribution stated that they did not have time to complete a survey. Relevant programs in SPSS (version 24) were used in making statistical analyses for testing the research hypotheses and research questions. Over half of respondents were female and had child(ren) (see Table 1A, Table 1B, & Table 1C). While the focus of this study is on gender and whether or not respondents had children, race is an important variable to consider in the context of Flint's crisis. A majority of respondents identified as White, which is not representative of the demographics in Flint. The majority of

TABLE 1 Respondents’ Demographic Information

1A Gender of Respondents		
Gender	N	%
Female	125	60.1
Male	82	39.4
No response	1	0.5
Total	208	100

1B Respondents with/out Children		
Children	N	%
Yes	136	65.3
No	65	31.3
No response	7	3.4
Total	208	100

1C Racial Identity		
Race	N	%
African American	74	35.6
White	107	51.4
Other races	24	11.5
No response	3	1.4
Total	208	100

Flint residents identify as Black/African American (U.S. Census Bureau, [n.d.](#), 2010); thus, the sample is not fully representative of Flint’s population.

Results

Gender and Information Seeking

Results regarding the first hypothesis were mixed (H_1). Women ($M = 0.64$, $SD = 0.48$) were less likely than men ($M = 0.49$, $SD = 0.5$) to get current information about the water crisis from friends face-to-face $\chi^2(1, N = 206) = 4.51$, $p = 0.034$, $V = 0.148$ (see Table 2). Women ($M = 0.66$, $SD = 0.48$) were also more likely than men ($M = 0.89$, $SD = 0.32$) to get current information from a government website $\chi^2(1, N = 206) = 13.89$, $p < 0.01$, $V = 0.26$.

TABLE 2 Respondents’ Current Sources for Information about the Water Crisis, by Gender

Current Sources of Information about the Water Crisis: 0 = yes, 1 = no				
Source	Gender	N	Mean	Std. Deviation
Twitter	Female	124	0.92	0.27
	Male	82	0.93	0.26
Facebook	Female	124	0.44	0.50
	Male	82	0.56	0.50
Instagram	Female	124	0.90	0.31
	Male	82	0.98	0.16
Face-to-face conversation with friend	Female	124	0.64	0.48
	Male	82	0.49	0.50
Media—Radio	Female	123	0.65	0.48
	Male	82	0.67	0.47
Media—TV	Female	124	0.30	0.46
	Male	82	0.34	0.48
Media Website	Female	124	0.65	0.48
	Male	82	0.65	0.48
Government Website	Female	124	0.66	0.48
	Male	82	0.89	0.32

Gender and Health-Related Information

Analyses did not support the second hypothesis (H2) as there were not significant differences between women’s and men’s future informational needs about crisis-related health topics (see Table 3). Specifically, there were *no* significant differences between genders as related to their desire to receive additional health-related information about the municipal tap water as a possible source of Legionnaires disease; E. coli contamination of the municipal tap water; the source of lead contamination in the municipal tap water; diet as a way to possibly reduce lead contamination; and paint, soil, and dust as possible sources of lead contamination.

TABLE 3 Respondents’ Desire for Future Crisis-Related Health Information, by Gender

Desire for Future Crisis-Related Health Information: 0 = do not agree at all, 4 = strongly agree				
Health Topic	Gender	N	Mean	Std. Deviation
Legionnaires disease	Female	118	3.22	1.32
	Male	78	3.1	1.39
E. coli	Female	118	3.31	1.24
	Male	78	3.2	1.27
Source of lead contamination of tap water	Female	117	3.35	1.18
	Male	78	3.17	1.31
Paint as a possible source of lead contamination	Female	117	2.75	1.56
	Male	78	2.7	1.56
Soil as a possible source of lead contamination	Female	116	3.11	1.34
	Male	77	2.92	1.37
Dust as a possible source of lead contamination	Female	117	2.96	1.37
	Male	78	2.56	1.57
Diet as a way to reduce lead contamination	Female	115	3.01	1.42
	Male	78	2.86	1.49

Gender and Internet Sources

Partial support for the third hypothesis (H3) was found as men ($M = 0.17$, $SD = 0.38$) were more likely than women ($M = 0.3$, $SD = 0.46$) to want to receive *future* information about the crisis from general media sources versus other sources (e.g., phone call, text), $\chi^2(1, N = 197) = 4.65$, $p = 0.03$, $V = 0.15$ (see Table 4). This result is interesting considering that men ($M = 0.65$, $SD = 0.48$) did not report media as top sources to receive *current* information about the water crisis (see Table 2). Further, while men ($M = 0.89$, $SD = 0.32$) indicated that they rarely got *current* information about the

TABLE 4 Respondents’ Preferences for Receiving Future Information about the Water Crisis, by Gender

Preferences for Receiving Future Information about Water Crisis: 0 = yes, 1 = no				
Channel	Gender	N	Mean	Std. Deviation
Email	Female	120	0.83	0.37
	Male	78	0.77	0.42
Text	Female	120	0.95	0.22
	Male	78	0.91	0.29
Social media	Female	120	0.75	0.44
	Male	78	0.74	0.44
Media (general)	Female	119	0.30	0.46
	Male	78	0.17	0.38
Website (general)	Female	119	0.40	0.49
	Male	78	0.47	0.50
Media website	Female	120	0.65	0.48
	Male	78	0.71	0.46
Government website	Female	120	0.63	0.49
	Male	78	0.71	0.46
Public officials via social media	Female	120	0.75	0.44
	Male	78	0.74	0.44

crisis via governmental websites, they indicated greater preference to receive *future* information about the crisis from governmental websites ($M = 0.71$, $SD = 0.46$).

Gender and Social Media

Findings for the first research question (RQ1) revealed that women ($M = 3.39$, $SD = 1.52$) used Facebook more than men ($M = 2.78$, $SD = 1.6$) to gather information about important events in the Flint community $t(162) = 2.45$, $p = 0.016$, $d = 0.394$ (see Table 5). Women ($M = 0.9$, $SD = 0.31$) were also more likely than men ($M = 0.98$, $SD = 0.16$) to get *current* information about the water crisis via Instagram $\chi^2(1, N = 206) = 4.73$, $p = 0.03$, $V = 0.152$ (see Table 2). There were *no* statistically significant differences between

TABLE 5 Respondents’ Preferences for Receiving Information about Important Events in Flint, by Gender

Preferences for Receiving Information about Important Events: 1 = never, 5 = always				
Channel	Gender	N	Mean	Std. Deviation
Radio	Female	98	3.05	1.52
	Male	64	3.17	1.44
Television	Female	109	4.21	1.02
	Male	73	4.14	1.19
Newspapers	Female	100	3.21	1.47
	Male	64	3.13	1.63
Friends and neighbors	Female	97	3.70	1.21
	Male	59	3.42	1.24
Facebook	Female	101	3.39	1.52
	Male	63	2.78	1.60
Twitter	Female	90	1.62	1.30
	Male	56	1.68	1.35
Websites	Female	101	3.54	1.55
	Male	59	3.46	1.50
Family members	Female	97	3.78	1.28
	Male	62	3.58	1.29

women ($M = 0.75$, $SD = 0.44$) and men ($M = 0.74$, $SD = 0.44$) in their desire to receive *future* information about the water crisis from public officials via social media $\chi^2 (1, N = 198) = 0.01$, $p = 0.92$, $V = 0.007$ (see Table 4). Additionally, there were *no* statistically significant differences between women ($M = 0.55$, $SD = 0.5$) and men ($M = 0.64$, $SD = 0.48$) in their preference to receive *future* information about the water crisis from sources on social media $\chi^2 (1, N = 198) = 1.61$, $p = 0.2$, $V = 0.09$ (see Table 4).

Children and Informational Needs

Regarding the fourth hypothesis (H4), respondents with children ($M = 2.94$, $SD = 1.42$), were more likely to want additional information about dust as a source of lead contamination than

respondents without children ($M = 2.47$, $SD = 1.54$), $t(187) = 2.07$, $p = 0.04$, $d = 0.321$. However, there were *no* other statistically significant differences between respondents with children and those without children regarding crisis-related informational needs.

Gender, Children, Informational Needs, and Media Use

Tests for RQ2 noted differences in the use of government websites to seek out *current* information about the crisis among women with children, women without children, men with children, and men without children, $\chi^2 (3, N = 199) = 13.36$, $p = 0.004$, $V = 0.258$. Bonferroni post-hoc comparisons indicated the statistical difference was between women with children ($M = 0.64$, $SD = 0.48$) and men without children ($M = 0.91$, $SD = 0.3$) ($p = 0.015$) as well as between women with children ($M = 0.64$, $SD = 0.48$) and men with children ($M = 0.86$, $SD = 0.35$) ($p = 0.026$). Specifically, women with children were more likely to use government websites to seek out current information about the crisis. The four groups also differed in their preferences to seek out *current* information about the crisis via “other” websites (e.g., nongovernmental organizations’ websites, like community nonprofit websites or local faith-based organization websites), $\chi^2 (3, N = 199) = 7.992$, $p = 0.046$, $V = 0.2$. Bonferroni post-hoc comparisons indicated the statistical difference was between men with children ($M = 1.0$, $SD = 0.00$) and men without children ($M = 0.84$, $SD = 0.37$) ($p = 0.039$), indicating that men with children were more likely than men without children to seek out current information about the crisis from websites *not* associated with government or media. Lastly, there was a significant difference among the four groups’ preference toward and use of phone calls from public officials to receive current information about the crisis $\chi^2 (3, N = 198) = 12.455$, $p = 0.006$, $V = 0.251$. Bonferroni post-hoc comparisons indicated the statistical difference was between women without children ($M = 0.76$, $SD = 0.44$) and women with children ($M = 0.94$, $SD = 0.23$) ($p = 0.006$) as well as between women without children ($M = 0.76$, $SD = 0.44$) and men with children ($M = 0.95$, $SD = 0.21$) ($p = 0.012$). Simply put, results suggest a relationship between women without children and a preference toward receiving information about the

crisis from public officials via phone more than women with children and more than men with children.

There were *no* statistically significant differences between women without children ($M = 3.28$, $SD = 1.28$), women with children ($M = 3.37$, $SD = 1.15$), men without children ($M = 3.03$, $SD = 1.47$), and men with children ($M = 3.27$, $SD = 1.23$) regarding their *future* informational needs. Strikingly, there were *no* statistically significant differences among the four groups' desire to receive future crisis-related health information. There were also *no* statistically significant differences among the four groups' preferred media and preferred sources for receiving future information about the water crisis.

Implications and Discussion

Results of this study suggest relationships between media uses, informational needs, and source preferences among Flint residents as related to gender and whether or not individuals had children. Specifically, results suggest women and men varied in their preferred informational sources and some media uses, but there were not statistically significant differences between women and men in their desire to receive *future* crisis-related health information (e.g., Legionnaires disease). Respondents with children wanted more information about dust as a possible source of lead contamination compared to respondents without children. Women with children were more likely to prefer receiving current information about the crisis from government websites and, in general, women utilized Facebook and Instagram more than men to gather information about the crisis. To a greater degree than men without children, men with children were more likely to seek out current information about the crisis via "other" websites, such as nongovernmental organizations' websites. Surprisingly, there were not significant differences among women without children, women with children, men without children, and men with children regarding their desire for future crisis-related health information. This finding may be a function of the intense focus on the immediate needs for information related to the crisis, rather than focus on future informational needs. The pressing, immediate needs of the crisis

may have decreased respondents' focus on their speculative future informational needs. As such, it is important to discuss these findings in relation to extant research.

Many results of this study are consistent with extant research. During crises, women generally have higher informational needs and seek out information at higher levels than men (Spence et al., 2006). These results *may* be explained by roles women have traditionally taken on as caregivers, mothers, helpers for the injured, and general household managers, which often become more demanding during a crisis (Enarson et al., 2006; Fothergill, 1999; Halvorson, 2004). In Flint, this may be even more pressing as 44% of children live in single-parent households and over 80% of all births in the city are to unmarried women (County Health Rankings, 2019; Mack, 2017). Based on this information, being a mother may have increased respondents' need for crisis-related information and may have led to higher levels of information seeking on social media (Enarson et al., 2006; Hamama-Raz et al., 2015; Spence et al., 2008). Yet, men with children did indicate significantly high levels of information seeking on specific media, such as websites *not* associated with government or media (e.g., community nonprofit websites, local faith-based organization websites). Therefore, it is also possible that being a father may have increased respondents' crisis-related informational needs and may have led to higher levels of information seeking on specific media. To meet the crisis-related informational needs of parents, practitioners should consider how they can strategically place crisis communication messages to effectively reach this target audience (Seeger & Sellnow, 2019). Results from this study suggest that messages about current informational needs should be placed on government websites when trying to reach mothers and nongovernmental websites when trying to reach fathers. However, additional research is needed to confirm this suggestion as related to other crisis contexts and the relationship among gender, whether or not an individual has children, information seeking, and media uses during crises.

Being a parent is an identity that can function to influence media use during crises. However, little support was found for the fourth hypotheses. The only topic that respondents with children

wanted additional information about at significantly higher levels than respondents without children was dust as a source of lead contamination. Furthermore, the second hypothesis asserted that women would be more interested than men in gaining additional health-related information about the crisis. However, data did not support this hypothesis. Extant research has also reported similar findings. In a study about the I-35W bridge collapse in Minneapolis, Minnesota, Lachlan, Spence, and Nelson (2010) did not discover gender differences related to information seeking.

There are several possible explanations as to why there were not significant differences among respondents' informational needs based on gender and whether or not they had children. First, *all* members of the Flint community may have been similarly concerned about health-related topics and the impact of lead contamination on children. Other familial relationships, like siblings, aunts, uncles, and grandparents may have had similar informational needs about lead and other health-related topics. In addition, lead was only *one* of several health issues and risks associated with Flint's water crisis (Day et al., 2019; Hanna-Attisha et al., 2016; Masten et al., 2016; Zahran et al., 2018; Zahran et al., 2017). The crisis created a wide variety of public health threats that impacted the entire community. Finally, because water is a universal need, residents of all genders, with/out children, and other demographics were impacted by this crisis and their informational needs were likely similarly distributed.

There were notable difference among genders in their media uses. Women, for instance, utilized Facebook and Instagram more than men to seek out current information about the crisis. Regarding *general* social media use, women tend to use these platforms at higher rates than men (Pew Research Center, 2019). Yet, less is known about patterns of use related to newer social media—like Instagram—for seeking information during crises. In particular, scholars have suggested that Instagram may aid crisis communication efforts due to its growing popularity, its large user base with over one billion monthly active users, its ability to dialogically engage publics, and its ability to support visual imagery and graphics (Guidry et al., 2017; Instagram, 2019). Together, study results *and* general social media use trends suggest that Facebook

and Instagram may be suitable outlets for crisis communication, especially when attempting to reach individuals who identify as a woman.

Social media continue to grow in popularity as places for individuals to gather and share crisis-related information. People use social media to gather personal information and check in with family/friends during a crisis, whereas legacy mass media are historically associated with educational uses and sources for information confirmation (Austin et al., 2012; Jurgens & Helsloot, 2018; Sellnow & Seeger, 2013). As there were high levels of distrust toward public officials and governmental agencies in Flint (Morckel & Terzano, 2018), residents may have turned to non-governmental or non-traditional sources, such as those available on social media. It is extremely important to consider how perceptions of public officials and governmental agencies may have impacted respondents' media uses, informational needs, and source preferences. Extant research, along with results from this study, suggests that practitioners consider affected populations' perception(s) of public officials and governmental agencies when crafting and disseminating crisis communication. Some crisis-affected publics may be hesitant to seek information from government-associated sources due to distrust in these entities. In Flint, distrust toward government officials and agencies likely influenced residents' media uses, informational needs, and source preferences.

Early in Flint's crisis, government officials denied and ignored residents' concerns about the water. According to some reports, officials withheld information from the public which likely evoked distrust in official messages about the water crisis (Morckel & Terzano, 2018). In Flint, distrust even broadened to include the scientific community and nongovernmental experts (Carrera et al., 2019). Thus, distrust in official crisis communication could have impacted respondents' media uses, informational needs, and source preferences. In fact, the Michigan Civil Rights Commission (MCRC, 2017) alleged the presence and role of systemic racism within Flint's crisis, the crisis response, and crisis recovery efforts. The MCRC report could have further promoted low levels of trust in government officials, especially as Flint's population is primarily Black/African American and most residents live at or below the federal poverty line (U.S. Census Bureau, n.d., 2010). Making

this situation even more problematic is that people living in poverty, female-headed households, and ethnic and racial minorities are considered vulnerable populations (De Chesnay & Anderson, 2016; Nsiah-Kumi, 2008; Spence & Lachlan, 2016). Vulnerable groups are more susceptible to the adverse effects of crises. To clarify, vulnerability is:

the result of several factors, including physical proximity to a risk, individual characteristics such as education, financial assets, constraints, physical abilities, and choices made by an individual. It involves both environmental and social components such as structural issues, gender, race, socioeconomic status, occupation, resources, social dependence, and social networks. (Spence & Lachlan, 2016, p. 215)

Vulnerable populations make up a significant portion of Flint's demographic. Thus, understanding their media uses, informational needs, and source preferences is critical to constructing effective crisis communication. It has been suggested that race may influence informational needs and source preferences surrounding the Flint water crisis. Specifically, extant research has suggested that Black/African Americans' media uses, informational needs, and source preferences differed from other racial groups within the context of Flint's crisis (Day et al., 2019). Trust also plays an important role in crisis communication, especially among vulnerable populations that have been systemically disadvantaged and mistreated, like much of the population in Flint (MCRC, 2017).

Trust is linked to source credibility and message consistency. Trust, source credibility, and message consistency impact message reception and the likelihood of an individual enacting protective actions (Drottz-Sjöberg, 2000; Maeda & Miyahara, 2003; Nsiah-Kumi, 2008; Richards et al., 2015). With low levels of trust, source credibility, and message consistency in the ecological context of Flint's crisis, it is possible that respondents modified their "typical" media uses and source preferences to meet their informational needs surrounding the crisis context, which supports propositions advanced by UGT (Katz, Blumler, & Gurevitch, 1974; Katz, Haas, & Gurevitch, 1973). Simply, distrust is a major inhibitor to crisis and risk communication. When crisis-affected individuals do not trust government officials who are handling the crisis,

important messages about protective actions may be ignored, misinterpreted, or questioned (Cordasco et al., 2007; Wachinger et al., 2013). Context and the local perspective are crucial to consider during crises (Sellnow & Seeger, 2013), especially as Flint has a unique demographic makeup and complicated history as related to race and economics (MCRC, 2017; Morckel & Terzano, 2018).

Nearly 30% of Flint's population is under the age of 18 and living with a parent or guardian (U.S. Census Bureau, n.d.). Lead contamination and subsequent bacterial contamination—like those documented in Flint's water crisis—are associated with long-term, serious health issues in children and adolescents, such as developmental delays and behavior issues like attention deficit/hyperactivity disorder (Hanna-Attisha et al., 2016; Zahran et al., 2017). These serious crisis-related health implications are prominent reasons why crisis-affected individuals' media uses, informational needs, and source preferences must be understood. Such knowledge is imperative to ensuring that crisis communication is effective and relevant to affected publics.

Limitations

This project is subject to several limitations. First, the sample for this study, although random, is not entirely representative of Flint's population (U.S. Census Bureau, n.d., 2010). The primary difference is with the representation of race (U.S. Census Bureau, n.d.). While the City of Flint is 53.9% Black or African American, the sample for this study was 35.6% Black or African American and had overrepresentation of White residents when compared to U.S. Census Bureau (n.d.) data (see Table 1C). A possible reason that there is underrepresentation of Black/African American individuals in this study may be due to the sampling sites and time of day (i.e., during traditional work hours). The water distribution sites were set up like "drive-thrus," which required the use of a vehicle (Flint Cares, 2016). The city was mandated to arrange water delivery for residents that could not pick up water at the distribution sites and neighbors may have picked up water for one another too (Kennedy, 2016). Another reason that the sample may lack representativeness is due to the random, in-the-field sampling procedure, which utilized RTNs.

The validity of the survey questionnaire is another important limitation to acknowledge. The questionnaire has not been formally tested, though it has been used in several other studies with similar results, suggesting its reliability (Day et al., 2019; Procopio & Procopio, 2007; Spence et al., 2011; Spence, Lachlan, & Griffin, 2007; Spence et al., 2006; Spence et al., 2005). Questions about validity are partially addressed through the survey's reference to communication processes and channels that have clear referents, such as "face-to-face conversation," "Facebook," and so forth. The survey instrument's validity and reliability, however, should be addressed in future research.

Another limitation of this study involves the way gender was measured as a binary construct. Though crisis-focused research has traditionally measured gender as a binary construct (e.g., Lachlan, Spence, & Seeger, 2009; Sheldon & Antony, 2018; Spence et al., 2006; Xie et al., 2017), this is not representative of how gender identities are increasingly reflected in society. Moving forward, crisis and risk-related research should allow participants to identify their gender in an open-ended response format when completing surveys to more accurately reflect the fluid nature of gender identity. In ways, this study also represents women as primary caregivers due to the high rate of single mothers in Flint, Michigan (County Health Rankings, 2019; Mack, 2017); however, this assumption should be considered a limitation of this study and carefully considered when interpreting results. While in some contexts, women may serve as principle caregivers to children, this is highly contextual and changing. To help alleviate limitations related to gender, future research should consider the crisis-related informational needs of caregivers/parents of children in general, regardless of their biological relationship to the child.

Finally, several limitations are associated with the context of the investigation. The Flint crisis was highly politicized and collecting data in a timely manner did not allow for control over all variables. High levels of distrust, ongoing issues of social justice, history of environmental racism, and high rates of poverty—although not the focus of this investigation—cannot be discounted (MCRC, 2017; Robinson et al., 2018). Although collecting data within the context of an actual crisis event is challenging, studies such as this

one can provide important insights that are garnered from *affected publics* versus that of experimental designs or hypothetical crisis scenarios that sample from student populations.

Conclusion

Communication plays a central role in managing crises. As water-related risks and crises are projected to increase in frequency in the near future (Centers for Disease Control and Prevention [CDC], 2016; Masten et al., 2016), crisis communication will become even more important. However, in the case of Flint's water crisis, it can be argued that the lack of trustworthy and timely crisis communication prompted respondents to utilize specific media and sources in an attempt to gratify their informational needs. Surprisingly, gender and whether or not respondents had children was not significantly related to respondents' desire to receive *future* crisis-related health information. There were, however, some notable differences in respondents' media uses. As related to future research and praxis, these results should be interpreted cautiously especially since Flint's crisis is context-dependent, complex, and exacerbated by systemic issues. Although this study offers some perspective into the dynamics of crisis-related media uses, informational needs, and source preferences, future research is needed to address the contextual, communicative exigencies of crisis-affected publics.

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References

- Abdeen, Z., Qasrawi, R., Nabil, S., & Shaheen, M. (2008). Psychological reactions to Israeli occupation: Findings from the national study of school-based screening in Palestine. *International Journal of Behavioral Development*, 32(4), 290–297. <https://doi.org/10.1177/0165025408092220>
- Alexander, D. E. (2014). Social media in disaster risk reduction and crisis management. *Science and Engineering Ethics*, 20(3), 717–733. <https://doi.org/10.1007/s11948-013-9502-z>
- Allen, G. M., Parrillo, S. J., Will, J., & Mohr, J. A. (2007). Principles of disaster planning for the pediatric population. *Prehospital and Disaster Medicine*, 22(6), 537–540. <https://doi.org/10.1017/s1049023x00005392>
- Archibald, M. M., Caine, V., Ali, S., Hartling, L., & Scott, S. D. (2015). What is left unsaid: An interpretive description of the information needs of parents of children with asthma. *Research in Nursing & Health*, 38(1), 19–28. <https://doi.org/10.1002/nur.21635>
- Austin, L., Liu, B., & Jin, Y. (2012). How audiences seek out crisis information: Exploring the social-mediated crisis communication model. *Journal of Applied Communication Research*, 40(2), 188–207. <https://doi.org/10.1080/00909882.2012.654498>
- Bellinger, D. C. (2016). Lead contamination in Flint—An abject failure to protect public health. *The New England Journal of Medicine*, 374(12), 1101–1103. <https://doi.org/10.1056/nejmp1601013>
- Blumler, J. G. (1979). The role of theory in uses and gratifications studies. *Communication Research*, 6(1), 9–36. <https://doi.org/10.1177/009365027900600102>
- Brashers, D. E., Neidig, J. L., Haas, S. M., Dobbs, L. K., Cardillo, L. W., & Russell, J. A. (2000). Communication in the management of uncertainty: The case of persons living with HIV or AIDS. *Communication Monographs*, 67(1), 63–84. <https://doi.org/10.1080/03637750009376495>

- Burke, J. A., Spence, P. R., & Lachlan, K. A. (2010). Crisis preparation, media use, and information seeking during Hurricane Ike: Lessons learned for emergency management. *Journal of Emergency Management*, 8(5), 27–37. <https://doi.org/10.5055/jem.2010.0030>
- Carrera, J., Key, K., Bailey, S., Hamm, J., Cuthbertson, C., Lewis, E., Wolford, S. J., Hill DeLoney, E., Greene-Moton, E., Wallace, K., Robinson, D. E., Byers, I., Piechowski, P., Evans, L., McCoy, A., Vereen, D., Sparks, A., & Calhoun, K. (2019). Community science as a pathway for resilience in response to a public health crisis in Flint, Michigan. *Social Sciences*, 8(3), 94. <https://doi.org/10.3390/socsci8030094>
- Centers for Disease Control and Prevention (CDC). (2016, March 8). Global water, sanitation, & hygiene (WASH). Archived at <https://web.archive.org/web/20160305031752/https://www.cdc.gov/healthywater/global/index.html>
- City of Flint, Michigan. (n.d.). State of emergency declared in the City of Flint. Archived at <https://web.archive.org/web/20160201153441/https://www.cityofflint.com/state-of-emergency/>
- CNN. (2016, March 7). Flint water crisis fast facts. Archived at <https://web.archive.org/web/20160310190537/http://www.cnn.com/2016/03/04/us/flint-water-crisis-fast-facts>
- Cordasco, K. M., Eisenman, D. P., Glik, D. C., Golden, J. F., & Asch, S. M. (2007). “They blew the levee”: Distrust of authorities among Hurricane Katrina evacuees. *Journal of Health Care for the Poor and Underserved*, 18(2), 277–282. <https://doi.org/10.1353/hpu.2007.0028>
- County Health Rankings. (2019). Genesee (GE): Michigan. <https://www.countyhealthrankings.org/app/michigan/2019/rankings/genesee/county/outcomes/overall/snapshot>
- Cuthbertson, C. A., Newkirk, C., Ilardo, J., Loveridge, S., & Skidmore, M. (2016). Angry, scared, and unsure: Mental health consequences of contaminated water in Flint, Michigan. *Journal of Urban Health*, 93(6), 899–908. <https://doi.org/10.1007/s11524-016-0089-y>

- Day, A. M., O'Shay-Wallace, S., Seeger, M. W., & McElmurry, S. (2019). Informational sources, social media use, and race in the Flint, Michigan, water crisis. *Communication Studies*, 70(3), 352–376. <https://doi.org/10.1080/10510974.2019.1567566>
- De Chesnay, M., & Anderson, B. A. (2016). *Caring for the vulnerable: Perspectives in nursing theory, practice, and research* (4th ed.). Jones & Bartlett Learning.
- Drottz-Sjöberg, B-M. (2000). Exposure to risk and trust in information: Implications for the credibility of risk communication. *The Australasian Journal of Disaster and Trauma Studies*, 2000–2, 1–13. <http://trauma.massey.ac.nz/issues/2000-2/drottz.htm>
- Enarson, E., Fothergill, A., & Peek, L. (2006). Gender and disaster: Foundations and directions. In H. Rodriguez, E. L. Quarantelli, and R. Dynes (Eds.), *Handbook of disaster research* (pp. 130–146). Springer. https://doi.org/10.1007/978-0-387-32353-4_8
- Eriksson, M., & Olsson, E. (2016). Facebook and Twitter in crisis communication: A comparative study of crisis communication professionals and citizens. *Journal of Contingencies and Crisis Management*, 24(4), 198–208. <https://doi.org/10.1111/1468-5973.12116>
- Flint Cares. (2016). Point of distribution sites. <https://web.archive.org/web/20160621174000/http://flintcares.com/pods/>
- Flint Water Advisory Task Force. (2016, March 21). Flint Water Advisory Task Force: Final report. *The Office of Governor Rick Snyder, State of Michigan*. https://web.archive.org/web/20160323183242/https://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf
- Fothergill, A. (1999). Women's roles in a disaster. *Applied Behavioral Science Review*, 7(2), 125–143. [https://doi.org/10.1016/S1068-8595\(00\)80014-8](https://doi.org/10.1016/S1068-8595(00)80014-8)
- Fothergill, A. (2004). *Heads above water: Gender, class and family in the Grand Forks Flood*. State University of New York Press.
- Gable, L., & Buehler, J. W. (2017). Criticized, fired, sued, or prosecuted: Hindsight and public health accountability. *Public Health Reports*, 132(6), 676–678. <https://doi.org/10.1177/0033354917730820>

- Guidry, J. D., Jin, Y., Orr, C. A., Messner, M., & Meganck, S. (2017). Ebola on Instagram and Twitter: How health organizations address the health crisis in their social media engagement. *Public Relations Review*, 43(3), 477–486. <https://doi.org/10.1016/j.pubrev.2017.04.009>
- Gustafsson, P. E. (1998). Gender differences in risk perception: Theoretical and methodological perspectives. *Risk Analysis*, 18(6), 805–811. <https://doi.org/10.1111/j.1539-6924.1998.tb01123.x>
- Halvorson, S. J. (2004). Women's management of the household health environment: Responding to childhood diarrhea in the northern areas, Pakistan. *Health and Place*, 10(1), 43–58. [https://doi.org/10.1016/s1353-8292\(03\)00018-2](https://doi.org/10.1016/s1353-8292(03)00018-2)
- Hamama-Raz, Y., Palgi, Y., Shrira, A., Goodwin, R., Kaniasty, K., & Ben-Ezra, M. (2015). Gender differences in psychological reactions to Hurricane Sandy among New York metropolitan area residents. *Psychiatric Quarterly*, 86(2), 285–296. <https://doi.org/10.1007/s11126-014-9333-3>
- Hanna-Attisha, M., LaChance, J., Sadler, R., & Schnepf, A. (2016). Elevated blood lead levels in children associated with the Flint drinking water crisis: A spatial analysis of risk and public health response. *American Journal of Public Health*, 106(2), 283–290. <https://doi.org/10.2105/ajph.2015.303003>
- Hipper, T. J., Davis, R., Massery, P. M., Turchi, R. M., Lubell, K. M., Pechta, L. E., Rose, D. A., Wolkin, A., Briseño, L., Franks, J. L., & Chernak, E. (2018). The disaster information needs of families of children with special healthcare needs: A scoping review. *Health Security*, 16(3), 178–192. <https://doi.org/10.1089/hs.2018.0007>
- Houston, J. B., Hawthorne, J., Perreault, M. F., Park, E. H., Goldstein Hode, M., Halliwell, M. R., Turner McGowen, S. E., Davis, R., Vaid, S., McElderry, J. A. Griffith, S. A. (2015). Social media and disasters: A functional framework for social media use in disaster planning, response, and research. *Disasters*, 39(1), 1–22. <https://doi.org/10.1111/disa.12092>
- Instagram. (2019). Our story: A quick walk through our history as a company. <https://instagram-press.com/our-story/>

- Jurgens, M., & Helsloot, I. (2018). The effect of social media on the dynamics of (self) resilience during disasters: A literature review. *Journal of Contingencies and Crisis Management*, 26(1), 79–88. <https://doi.org/10.1111/1468-5973.12212>
- Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Utilization of mass communication by the individual. In J. G. Blumer and E. Katz (Eds.), *The uses of mass communications: Current perspectives on gratifications research* (pp. 19–32). Sage.
- Katz, E., Haas, H., & Gurevitch, M. (1973). On the use of the mass media for important things. *American Sociological Review*, 38(2), 164–181. <https://doi.org/10.2307/2094393>
- Kennedy, M. (2016, November 11). Judge orders bottled water delivery to Flint residents amid lead crisis. *NPR*. Archived at <https://web.archive.org/web/20161112004807/https://www.npr.org/sections/thetwo-way/2016/11/11/501711450/judge-orders-bottled-water-delivery-to-flint-residents-amid-lead-crisis>
- Krings, A., Kornberg, D., & Lane, E. (2019). Organizing under austerity: How residents' concerns became the Flint water crisis. *Critical Sociology*, 45(4–5), 583–597. <https://doi.org/10.1177/0896920518757053>
- Lachlan, K. A., Spence, P. R., & Nelson, L. D. (2010). Gender differences in negative psychological responses to crisis news: The case of the I-35W collapse. *Communication Research Reports*, 27(1), 38–48. <https://doi.org/10.1080/08824090903293601>
- Lachlan, K. A., Spence, P. R., & Seeger, M. (2009). Terrorist attacks and uncertainty reduction: Media use after September 11. *Behavioral Sciences of Terrorism and Political Aggression*, 1(2), 101–110. <https://doi.org/10.1080/19434470902771683>
- Lai, C., & Tang, T. (2018). From information behaviors to disaster preparedness: Navigating individuals' general and disaster curation in U.S., China, and Australia. *Computers in Human Behavior*, 88, 37–46. <https://doi.org/10.1016/j.chb.2018.06.023>
- Lev-On, A. (2012). Communication, community, crisis: Mapping uses and gratifications in the contemporary media environment. *New Media & Society*, 14(1), 98–116. <https://doi.org/10.1177/1461444811410401>

- Lin, X., Spence, P. R., Sellnow, T. L., & Lachlan, K. A. (2016). Crisis communication, learning and responding: Best practices in social media. *Computers in Human Behavior*, 65, 601–605. <https://doi.org/10.1016/j.chb.2016.05.080>
- Lu, X. (2018). Online communication behavior at the onset of a catastrophe: An exploratory study of the 2008 Wenchuan earthquake in China. *Natural Hazards*, 91(2), 785–802. <https://doi.org/10.1007/s11069-017-3155-1>
- Macias, W., Hilyard, K., & Freimuth, V. (2009). Blog functions as risk and crisis communication during Hurricane Katrina. *Journal of Computer-Mediated Communication*, 15(1), 1–31. <https://doi.org/10.1111/j.1083-6101.2009.01490.x>
- Mack, J. (2017). Which Michigan county ranks no. 1 in births to unmarried women? *MLive Media Group*. Archived at https://web.archive.org/web/20200605153655/https://www.mlive.com/news/2017/11/which_michigan_counties_have_h.html
- Maeda, Y., & Miyahara, M. (2003). Determinants of trust in industry, government, and citizen's groups in Japan. *Risk Analysis*, 23(2), 303–310. <https://doi.org/10.1111/1539-6924.00310>
- Martin, M. (2010). Child participation in disaster risk reduction: The case of flood-affected children in Bangladesh. *Third World Quarterly*, 31(8), 1357–1375. <https://doi.org/10.1080/01436597.2010.541086>
- Masten, S. J., Davies, S. H., & McElmurry, S. P. (2016). Flint water crisis: What happened and why? *Journal of American Water Works Association*, 108(12), 22–34. <https://doi.org/10.5942/jawwa.2016.108.0195>
- McQuail, D. (1984). With the benefit of hindsight: Reflections on uses and gratifications research. *Critical Studies in Mass Communication*, 1(2), 177–193. <https://doi.org/10.1080/15295038409360028>
- Michigan Civil Rights Commission (MCRC). (2017, February 17). The Flint water crisis: Systemic racism through the lens of Flint. Archived at https://web.archive.org/web/20170218145044/https://www.michigan.gov/documents/mdcr/MDCR_Flint_Water_Crisis_Report_552190_7.pdf

- Morckel, V., & Terzano, K. (2018). Legacy city residents' lack of trust in their governments: An examination of Flint, Michigan residents' trust at the height of the water crisis. *Journal of Urban Affairs*, 1–17. <https://doi.org/10.1080/07352166.2018.1499415>
- Murembya, L., Guthrie, E. (2016, April). *Demographic and labor market profile: City of Flint. Prepared by the State of Michigan, Department of Technology, Management, and Budget*. Archived at https://web.archive.org/web/20200605154245/https://milmi.org/Portals/198/publications/Flint_City_Demographic_and_Labor_Mkt_Profile.pdf
- Nsiah-Kumi, P. A. (2008). Communicating effectively with vulnerable populations during water contamination events. *Journal of Water and Health*, 6(S1), 63–75. <https://doi.org/10.2166/wh.2008.041>
- Park, S., & Avery, E. J. (2018). Effects of media channel, crisis type and demographics on audience intent to follow instructing information during crisis. *Journal of Contingencies and Crisis Management*, 26(1), 69–78. <https://doi.org/10.1111/1468-5973.12137>
- Parmer, J., Baur, C., Eroglu, D., Lubell, K., Prue, C., Reynolds, B., & Weaver, J. (2016). Crisis and emergency risk messaging in mass media news stories: Is the public getting the information they need to protect their health? *Health Communication*, 31(10), 1215–1222. <https://doi.org/10.1080/10410236.2015.1049728>
- Peek, L., & Fothergill, A. (2008). Displacement, gender, and the challenges of parenting after Hurricane Katrina. *NWSA Journal*, 20(3), 69–105. <https://www.muse.jhu.edu/article/256897>
- Pew Research Center. (2019). Social media fact sheet. Archived at <https://web.archive.org/web/20190325191618/https://www.pewinternet.org/fact-sheet/social-media>
- Procopio, C. H., & Procopio, S. T. (2007). Do you know what it means to miss New Orleans? Internet communication, geographic community, and social capital in crisis. *Journal of Applied Communication Research*, 35(1), 67–87. <https://doi.org/10.1080/00909880601065722>

- Richards, P., Amara, J., Mokuwa, E., Mokuwa, A., & Soluku R. (2015). Village responses to Ebola virus disease and its prevention: Ebola response. *Anthropology Platform*. Archived at https://web.archive.org/web/20151205010621/http://www.ebola-anthropology.net/case_studies/village-responses-to-ebola-virus-disease-and-its-prevention
- Rickwood, D., Deane, F. P., Wilson, C. J., & Ciarrochi, J. (2005). Young people's help seeking for mental health problems. *Australian e-Journal for the Advancement of Mental Health*, 4, 1–34. <http://dx.doi.org/10.5172/jamh.4.3.218>
- Robinson, T. M., Shum, G., & Singh, S. (2018). Politically unhealthy: Flint's fight against poverty, environmental racism, and dirty water. *Journal of International Crisis and Risk Communication Research*, 1(2), 303–324. <https://doi.org/10.30658/jicrcr.1.2.6>
- Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication and Society*, 3(1), 3–37. https://doi.org/10.1207/S15327825MCS0301_02
- Savoia, E., Lin, L., & Viswanath, K. (2017). Sources of information during the 2014 West Virginia water crisis: A cross-sectional survey. *Disaster Medicine and Public Health Preparedness*, 11(2), 196–206. <https://doi.org/10.1017/dmp.2016.98>
- Seeger, M. W., & Sellnow, T. L. (2019). *Communication in times of trouble: Best practices for crisis and emergency risk communication*. Wiley-Blackwell.
- Seeger, M. W., Vennette, S., Ulmer, R. R., & Sellnow, T. L. (2002). Media use, information seeking and reported needs in post crisis contexts. In B. S. Greenberg (Ed.), *Communication and terrorism* (pp. 53–63). Hampton Press.
- Sellnow, T. L., & Seeger, M. W. (2013). *Theorizing crisis communication*. Wiley.
- Sheldon, P., & Antony, M. G. (2018). Sharing emergency alerts on a college campus: How gender and technology matter. *Southern Communication Journal*, 83(3), 167–178. <https://doi-org/10.1080/1041794X.2018.1437467>

- Sjöberg, U. (2018). It is not about facts—It is about framing. The app generation's information-seeking tactics: Proactive online crisis communication. *Journal of Contingencies and Crisis Management*, 26(1), 127–137. <https://doi.org/10.1111/1468-5973.12145>
- Sommerfeldt, E. J. (2015). Disasters and information source repertoires: Information seeking and information sufficiency in postearthquake Haiti. *Journal of Applied Communication Research*, 43(1), 1–22. <https://doi.org/10.1080/00909882.2014.982682>
- Spence, P. R., & Lachlan, K. A. (2016). Reoccurring challenges and emerging threats: Crises and the new millennium. In A. Schwarz, M. W. Seeger, and C. Auer (Eds.), *The handbook of international crisis communication research* (pp. 212–223). John Wiley & Sons, Inc. <https://doi.org/10.1002/9781118516812.ch20>
- Spence, P. R., Lachlan, K. A., & Burke, J. A. (2008). Crisis preparation, media use, and information seeking: Patterns across Katrina evacuees and lessons learned for crisis communication. *Journal of Emergency Management*, 6(2), 11–23. <https://doi.org/10.5055/jem.2010.0030>
- Spence, P. R., Lachlan, K. A., & Burke, J. A. (2011). Differences in crisis knowledge across age, race, and socioeconomic status during Hurricane Ike: A field test and extension of the knowledge gap hypothesis. *Communication Theory*, 21(3), 261–278. <https://doi.org/10.1111/j.1468-2885.2011.01385.x>
- Spence, P. R., Lachlan, K. A., & Burke, J. M. (2007). Adjusting to uncertainty: Coping strategies among the displaced after Hurricane Katrina. *Sociological Spectrum*, 27(6), 653–678. <https://doi.org/10.1080/02732170701533939>
- Spence, P. R., Lachlan, K. A., & Griffin, D. R. (2007). Crisis communication, race, and natural disasters. *Journal of Black Studies*, 37(4), 539–554. <https://doi.org/10.1177/0021934706296192>
- Spence, P. R., Westerman, D., Skalski, P. D., Seeger, M., Sellnow, T. L., & Ulmer, R. R. (2006). Gender and age effects on information-seeking after 9/11. *Communication Research Reports*, 23(3), 217–223. <https://doi.org/10.1080/08824090600796435>

- Spence, P. R., Westerman, D., Skalski, P. D., Seeger, M., Ulmer, R. R., Venette, S., & Sellnow, T. L. (2005). Proxemic effects on information seeking after the September 11 attacks. *Communication Research Reports*, 22(1), 39–46. <https://doi.org/10.1080/00036810500057930>
- Tatar, M., Amram, S., & Kelman, T. (2011). Help-seeking behaviours of adolescents in relation to terrorist attacks: The perceptions of Israeli parents. *British Journal of Guidance & Counselling*, 39(2), 131–147. <https://doi.org/10.1080/03069885.2010.547052>
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- U.S. Census Bureau. (n.d.). QuickFacts: Flint City, Michigan. Archived at <https://web.archive.org/web/20171108141951/https://www.census.gov/quickfacts/fact/table/flintcitymichigan/PST045216>
- U.S. Census Bureau. (2010). Interactive population map. <http://www.census.gov/2010census/popmap/>
- Utz, S., Schultz, F., & Glocka, S. (2013). Crisis communication online: How medium, crisis type and emotions affected public reactions in the Fukushima Daiichi nuclear disaster. *Public Relations Review*, 39(1), 40–46. <https://doi.org/10.1016/j.pubrev.2012.09.010>
- Van Zoonen, W., & van der Meer, T. (2015). The importance of source and credibility perception in times of crisis: Crisis communication in a socially mediated era. *Journal of Public Relations Research*, 27(5), 371–388. <https://doi.org/10.1080/1062726X.2015.1062382>
- Veil, S. R., Buehner, T., & Palenchar, M. J. (2011). A work-in-process literature review: Incorporating social media in risk and crisis communication. *Journal of Contingencies and Crisis Management*, 19(2), 110–122. <https://doi.org/10.1111/j.1468-5973.2011.00639.x>
- Wachinger, G., Renn, O., Begg, C., & Kuhlicke, C. (2013). The risk perception paradox—Implications for governance and communication of natural hazards. *Risk Analysis*, 33(6), 1049–1065. <https://doi.org/10.1111/j.1539-6924.2012.01942.x>

- Westerman, D., Spence, P. R., & Van Der Heide, B. (2014). Social media as information source: Recency of updates and credibility of information. *Journal of Computer-Mediated Communication*, 19(2), 171–183. <https://doi.org/10.1111/jcc4.12041>
- Xie, Y., Qiao, R., Shao, G., & Chen, H. (2017). Research on Chinese social media user's communication behaviors during public emergency events. *Telematics and Informatics*, 34(3), 740–754. <https://doi.org/10.1016/j.tele.2016.05.023>
- Zahran, S., McElmurry, S. P., Kilgore, P. E., Mushinski, D., Press, J., Love, N. G., Sadler, R. C., & Swanson, M. S. (2018). Assessment of the Legionnaires' disease outbreak in Flint, Michigan. *Proceedings of the National Academy of Sciences of the United States of America*, 115(8), E1730--E1739. <https://doi.org/10.1073/pnas.1808389115>
- Zahran, S., McElmurry, S. P., & Sadler, R. C. (2017). Four phases of the Flint water crisis: Evidence from blood lead levels in children. *Environmental Research*, 157, 160–172. <https://doi.org/10.1016/j.envres.2017.05.028>



Exploring Crisis Communication and Information Dissemination on Social Media: Social Network Analysis of Hurricane Irma Tweets

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ABSTRACT

This study utilized social network analysis to identify the top 10 Twitter influentials during the Hurricane Irma crisis period and examined the relationship between social media attributes and the bridge influence of controlling information flow. The number of a user's followers and tweets significantly predicted one's control of information. Crisis information tended to be shared in scattered subgroups. Social network boundaries impeded information diffusion, and the communication pattern was largely one-way. The findings partially supported the opinion leader argument while indicating that influentials can directly generate information, which is consistent with the social-mediated crisis communication model. Such findings will contribute to crisis literature and help emergency management professionals advance social media usage to disseminate crisis information, build effective communication, and provide immediate disaster relief responses.

KEYWORDS: crisis influence, opinion leader, social network analysis, social-mediated crisis communication

Introduction

While facing crises, the public experiences real uncertainties and concerns. To minimize the impact of a crisis and reduce the public's concerns and uncertainties, crisis managers need to provide

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sufficient information and effective communication in a timely manner. Social media platforms, such as Facebook and Twitter, have been shown to facilitate information dissemination, enable ordinary citizens to share ideas and information, and hence allow organizations and members of the public to develop interactive communication during crises (Sadri et al., 2017; Spence et al., 2015). Unfortunately, how crisis communication and information spread on social media is still unclear.

To answer this question, this study explored the bridge influence of controlling information flow and highlighted the importance of analyzing Twitter users' position in the network to identify crisis information influentials. By conducting a social network analysis, this study recognized the top 10 influentials in a crisis and unpacks crisis communication and information dissemination patterns. This study also examined the relationship between social media attributes (e.g., the number of followers, tweets, followed, and favorites) and influence levels.

In particular, this study collected real-time data—tweets surrounding Hurricane Irma. At its strongest, Hurricane Irma was a Category 5 hurricane with winds of 185 mph (National Weather Service, 2017). This crisis caused an estimated 129 deaths (Issa et al., 2018) and a total cost of \$50 billion in the United States (Cangialosi et al., 2018). It created uncertainties about returning to normal life. With a focus on examining the social-mediated crisis communication and information dissemination patterns of Hurricane Irma, 31,349 tweets and 16,627 Twitter accounts were analyzed. Based on the betweenness centrality (the number of shortest paths that a Twitter user connects other pairs of users, see Hansen et al., 2011), this study discovered the top 10 influential actors who can distribute information and tend to share some features, such as showing media backgrounds, having a large number of followers, and posting many tweets. The reciprocity during the communication process was low and hence the communication pattern was largely one-way.

Moreover, in-degree links were shown to mediate the relationship between the number of a user's followers and the user's central status in the network. In contrast, out-degree links did not mediate the relationship between the number of accounts that a

user had followed and one's ability in controlling information flow within the network. Furthermore, the number of followers and tweets significantly predicted users' levels of influence within the network.

These findings shed light on the future of theory building and practice for multiple reasons. The findings illustrate the crisis information flow surrounding Hurricane Irma on Twitter and clarify the confusion due to contradictory findings of the relationship between social media attributes and bridge influence. Discovering the characteristics of the top influentials can also help crisis management practitioners track crisis information on social media, provide prompt and accurate information, and eventually reduce the public's uncertainties.

Social-Mediated Communication and Information Flow during Crises

Members of the public need prompt and accurate information to reduce their uncertainty in order to make appropriate decisions and cope with crises. Social media has shown to not only provide real-time information for the public but also allow people to generate and share information (Morris et al., 2010; Sin & Kim, 2013). Unfortunately, developing effective social-mediated crisis communication remains a challenge. As shown in prior crisis studies, government organizations were less active compared to ordinary users and should have fully used social media as a primary crisis communication tool (Lachlan et al., 2014; Lin, Spence, et al., 2016). Understanding how information flows on social media would advance crisis theory building and guide crisis management practice. Opinion leaders have been shown to impact information flow in both traditional media and social media (Austin et al., 2012; Dubois & Gaffney, 2014; Jin & Liu, 2010; Katz & Lazarsfeld, 1955; Watts & Dodds, 2007).

Opinion Leader and the Two-Step Flow of Communication

Traditionally, research on personal influence focused on the two-step flow of communication that can be traced back to Katz and Lazarsfeld's (1955) research on opinion leaders, defined as "the

individuals who were likely to influence other persons in their immediate environment” (p. 3). According to the two-step flow of communication theory, a small group of opinion leaders is the information medium between the mass media and the public. In other words, information flows from the mass media through influentials to their followers (Katz & Lazarsfeld, 1955; Merton, 1968; Watts & Dodds, 2007). Specifically, the two-step flow of communication theory highlighted four features of being an influential: having followers, being viewed as an expert, being knowledgeable about the topic, and being in a position to exert social pressure or support (Dubois & Gaffney, 2014).

The argument of opinion leaders developing their influence has been well examined in mass media contexts (Weimann, 1994). However, it remains unspecified how influentials shape opinions and how the mechanism of information dissemination transfers from influentials to their followers or across entire communities (Watts & Dodds, 2007). This issue turns out to be more complex with the growth of social media that enables the public to voice their opinions and share crisis information as well as experiences with others (Marken, 2007). Different from traditional one-way communication, social media has the possibility to implement interactive communication among emergency management organizations and the public (Spence et al., 2015). The boundary between media professionals and non-elites on social media is not as clear as it is with traditional mass media. The shift to two-way, interactive communication may also impact crisis information flow and social influence diffusion.

Social-Mediated Crisis Communication Model

Previous research has shown that people used social media during crises to get emotional support, to seek insider information, and to maintain involvement with family and friends (Austin et al., 2012; Lachlan et al., 2014). According to the social-mediated crisis communication (SMCC) model (Jin & Liu, 2010), influential social media users create crisis information. Social media followers consume such information, and social media inactive members may be indirectly exposed to such information through social media

followers and/or traditional media impacted by influential social media creators (Austin et al., 2012). This argument suggests that influential social media users can become information providers rather than merely working as an information medium, which contradicts the two-step flow hypothesis. Previous research supports this argument by identifying the unique communication functions of influentials on Twitter, such as influentials sharing information and supporting information exchange during the 2017 Ariana Grande concert bombing (Zhao et al., 2019).

It is necessary to revisit these arguments and examine them with real-time social media data. To unpack the complex patterns of social-mediated crisis communication and information flow, this study explored how influential social media users impact information dissemination and crisis communication surrounding Hurricane Irma.

Influential Users on Social Media

Communication scholars have devoted tremendous efforts to unpack the social-mediated crisis information dissemination. Many studies in the literature have largely used the frequency of being retweeted as the criteria to evaluate information influence (Lachlan et al., 2014; Lin, Lachlan, & Spence, 2016; Lovejoy et al., 2012; Rainear et al., 2018; Sutton et al., 2015). For example, some studies focus on developing content analysis with certain samples (Lin, Lachlan, & Spence, 2016). Many studies examine the relationship between tweet formats (e.g., URL, hashtags, and multimedia files, Lachlan et al., 2014) and the frequency of a tweet being retweeted (Lovejoy et al., 2012; Rainear et al., 2018; Sutton et al., 2015).

Another common approach to determine influential actors was based on the number of their followers (Cha et al., 2010; Wu et al., 2011). This approach assumed that if an actor can be heard by others in the network, the actor is influential (Bakshy et al., 2011; Subbian & Melville, 2011). With these two approaches, some of the previous studies advocated certain strategies that can be used to promote the visibility of crisis information and increase specific emergency management organizations' influence in crisis communication.

Nevertheless, the frequency of being retweeted or the number of followers only reflects one aspect of an influential—having followers. Interestingly, as indicated by some research, having millions of followers does not necessarily represent the success of disseminating broadcasted tweets (Cha et al., 2010). These contradictory findings indicate that previous operationalizations did not capture some aspects of the multifaceted concept of opinion leaders. An influential is often seen as an expert by others; the influential shows knowledge and is in a position to exert social pressure (Dubois & Gaffney, 2014). These aspects have been largely ignored by previous research. These findings also suggest that scholars need to study the information network to identify information, influential users, and track information flow on social media.

To map influentials in crisis communication and information dissemination, this study utilized a social network analysis, a theoretical and methodological approach investigating social relationships and flows between people and other connected entities (Freeman, 2004; Sommerfeldt & Kent, 2015; Zhao et al., 2018). This author argued that the relationships between an influential actor and other actors are crucial while examining crisis information communication patterns and information flow.

Social Network Analysis

A social network articulates a social relationship or structure among individuals, social groups (e.g., family, school, company), and connected information communities, such as URLs and Twitter (Bandyopadhyay et al., 2011; Sommerfeldt & Kent, 2015). Social network analysis has been applied in multiple disciplines, such as management consulting, sociology, and public health (Borgatti et al., 2009). Nevertheless, this approach has not been fully utilized in examining social-mediated crisis communication. As previous research posited, investigating the “web of relationships” advanced the knowledge about the distribution of information and social support through networks (Valente, 2010; Valente & Rogers, 1995).

Information Distribution and Social Media Attributes

Sadri et al. (2017) analyzed Hurricane Sandy tweets and examined how the in-degree, out-degree, eccentricity, and closeness centrality impact information spreading (e.g., tweeting frequency). They found that Twitter users were more active in information distribution if they were less eccentric in the network. Sadri et al. also observed some clusters in which actors were more connected with each other and some isolators in the network. In addition, networks tend to be less transitive while larger subgraphs are more assortative (Sadri et al., 2017). Nevertheless, Sadri et al. did not further identify how a Twitter user's social media attributes impact the user's active role in the network.

Kim (2017) more closely analyzed social media attributes of influential actors by studying the information distribution of the hashtag AlphaGo. According to Kim, information was reciprocal among media sources, the public, and opinion leaders. In particular, opinion leaders were described by Kim as people who served as conversation starters, influentials, active engagers, network builders, and/or information bridges. Kim concluded that the number of accounts that a user has followed significantly predicted the user's central role in the information network. However, Kim's conclusions were built on examining the top 20 influential users' attributes while ignoring other actors' attributes. The significance of these results may be exaggerated. It is necessary to include all users while further exploring how users' attributes impact their influence levels. Moreover, based on Kim's description, conversation starters and influentials showed many in-degree links and affected receivers' opinions. Such vague and overlapping descriptions of conversation starters and influentials indicate unclear operationalizations of influence.

Measuring Influence

While investigating information flow on social media, many researchers assessed influence with various approaches. For instance, Cha et al. (2010) categorized influentials based on in-degree that presents how popular a Twitter user was in the network. Dubois and Gaffney (2014) further operationalized political influence with

five dimensions: in-degree, egocentric centrality (extended connections of a Twitter account), clustering coefficient, the ratio of a user's tweets containing keywords to all sampled tweets, and the frequency of being mentioned. According to Dubois and Gaffney, media outlets, journalists, and politicians were identified as influential based on in-degree and eigenvector centrality. However, political commentators and bloggers appear to be influentials based on their interactions with other users and message quality. These different conclusions regarding influential actors stem from the vague interpretation of the concept of influence.

Recent studies on social media influence in crises started mapping users' positions in certain networks to help researchers identify influentials. For instance, Zhao et al. (2018) conceptualized four dimensions of influence on social media: output, reactive outtake, proactive outtake, and network positioning. Specifically, Zhao et al. measured output based on the number of tweets a user posted and the time length of engagement; they assessed proactive outtake by examining the number of retweets, favorites, and followers. They measured reactive outtake by calculating the number of mentions, replies, and positive references. Last, Zhao et al. operationalized network positioning based on the degree centrality, betweenness centrality, as well as PageRank.

The inconsistent conceptual and operational definitions of influence reflect the growing need for social-mediated crisis communication research to be further explored. Meanwhile, these incoherent findings due to the different definitions of influence also create challenges for communication scholars to identify crisis influentials on social media and unpack the complex crisis information flow.

Various existing studies have already explored the features of being an influential, such as having a large number of followers (Cha et al., 2010; Wu et al., 2011) and presenting a long engagement time on social media (e.g., Zhao et al., 2018). The current study did not replicate these efforts. Instead, it examined influence based on the opinion leader concept and concentrated on the core of the opinion leader's role in the two-step flow communication hypothesis—as the intermediary in the information flow (Katz & Lazarsfeld, 1955; Merton, 1968; Watts & Dodds, 2007).

Guided by the argument of opinion leaders (Katz & Lazarsfeld, 1955), the SMCC model (Jin & Liu, 2010), and previous research, this study explored Twitter users' control of information to evaluate each actor's influence in the network. In particular, this study focused on bridge influence on Twitter—betweenness centrality that measures the shortest path between two users. When a Twitter user can easily serve as the information “bridge” that connects others, the user is influential in the network. The assumption of betweenness centrality echoes with the two-step flow communication hypothesis that highlights the influential's position of intermediating information flow. The current study embraces Dubois and Gaffney's (2014) idea that an influential user should be in a position to spread information. By examining the betweenness centrality in the crisis information network on Twitter, this study can identify the bridge influentials who are in the central position of the network.

Another goal of this study is to explore the relationship between a user's social media attributes and the user's bridge influence (betweenness centrality). Specifically, the social media attributes include the number of followers a Twitter user has presented, the total number of tweets a user has posted since joining Twitter, all the favorites the user has received, and the number of other accounts that the user has followed. As a side note, although Twitter changed “favorites” to “likes” in 2015 (Whitten, 2015), to be consistent with prior studies and to make a clear comparison with previous findings, the current study used the term of “favorites.”

Prior research exploring influence on social media has shown that influential users have more followers (e.g., Cha et al., 2010; Kim, 2017; Wu et al., 2011). However, it is still unclear how the number of followers impacts a Twitter user's influence levels. The current study aims to answer this question. The author argues that when a Twitter user has lots of followers, they are more visible and hence are more likely to show bridge influence in the information network. The visibility argument has been supported by Treem et al. (2020). The number of followers a user has, as indicated by Kim's findings (2017), was also shown to be positively associated with one's in-degree links and betweenness centrality. It should be noted that these findings may be exaggerated because only the

top influential users' attributes have been analyzed. This paper re-examined the relationships among followers, in-degree links, and betweenness centrality by analyzing the attributes and influence levels of all Twitter users in the information network surrounding Hurricane Irma. Therefore, inspired by previous findings, opinion leaders research (Dubois & Gaffney, 2014; Katz & Lazarsfeld, 1955), and the SMCC model (Jin & Liu, 2010), this paper posited that when one Twitter user is being followed by many accounts, the user is likely to be seen as an information provider reflected by the number of in-degree links (edges pointing toward the user) and hence is in a central position in the network.

H1: The more followers that a user has, the more in-degree links that the user would receive, resulting in the user being more central in the information network.

Similarly, if one Twitter user follows many accounts, the user will see many information resources and hence will be able to seek information from multiple sources. In other words, the user will present more out-degree links (edges leaving the user). As such, this study hypothesized that this user will likely be in a central position in the network.

H2: The more accounts that a user has followed, the more out-degree links that the user would present, resulting in the user being more central in the information network.

Besides being in the central position in a network, an influential is also characterized as being knowledgeable and therefore can generate information about a specific topic (e.g., the total number of tweets). To capture this feature of influence, this study also explored how the total number of tweets a user has posted predicts betweenness centrality.

Moreover, an influential is seen as an expert (Dubois & Gaffney, 2014; Katz & Lazarsfeld, 1955) and thereby an influential actor's posts should be valued. The degree to which a user's posts are valued can be assessed by the number of favorites that the user received. The author argued that these social media attributes predict Twitter users' influential levels. Following the logic, this paper

also investigated relationships between users' social media attributes (followers, following, tweets, and favorites) and the bridge influence.

H3: The number of accounts that a user followed, the number of followers, the number of tweets that a user posted, as well as the favorites that a user has received will predict the levels of influence in the network.

The ultimate purpose of this study is to improve the assessment of crisis information flow and crisis communication patterns. By developing a social network analysis, this paper explored the information network's density and reciprocity. The following research questions were proposed and examined.

RQ1: Who are the influential actors in the network of Hurricane Irma information dissemination?

RQ2: Through what patterns does information flow in the network?

Method

Data Collection

To include relevant information about Hurricane Irma on Twitter, the author checked the crisis period. Hurricane Irma formed on August 30, 2017, and turned into an extratropical storm after September 12 (National Oceanic and Atmospheric Administration, 2017; Weather Underground, 2017). The author collected 31,349 tweets (original tweets and retweets posted from September 1 to September 14, 2017) and 16,627 Twitter accounts with NodeXL Pro (Smith et al., 2010) that connects to the public Application Programming Interface of Twitter. Specifically, the author searched the keywords "Hurricane Irma" and "HurricaneIrma" to collect data. The keywords searching strategy is advantageous because this approach enables the author to collect all relevant data rather than limiting data to tweets with specific hashtags. The current dataset involved tweets with different hashtags, such as #HurricaneIrma, #Irma, #Florida, and #US.

Data Analyses

This study conducted a series of social network analyses with NodeXL Pro (Smith et al., 2010). In particular, to answer RQ1 and RQ2, each user’s betweenness centrality, in-degree links, and out-degree links were calculated. In addition, with the Clauset-Newman-Moore clustering algorithm, subgraphs were conducted to identify the crisis network subgroups about Hurricane Irma. The clustering coefficient, reciprocated edge ratio, network density, and average geodesic distance were calculated as well. Table 1 describes the explanation of each metric.

TABLE 1 Metric Description

Metric	Description
In-degree Links	The number of directed edges pointing toward a specific node. In this study, it refers to the number of Twitter accounts that seek information from a certain Twitter user.
Out-degree Links	The number of outgoing connections leaving from a specific node. In this study, it represents the number of links that a specific Twitter account used to seek out information.
Betweenness Centrality	The extent to which a Twitter user works as an information “bridge” along the shortest path between other users.
Clustering Coefficient	The degree to which a Twitter user is embedded within a graph where all users tend to tightly cluster together.
Network Density	The ratio of edges relative to the number of all possible edges. It reflects the cohesiveness in the network.
Reciprocated Edge Ratio	The portion of edges that have reciprocated interactions. In this study, it reveals the information exchange between Twitter users and reciprocity of communication patterns.
Geodesic Distance	The length of the shortest geodesic between two Twitter users.

To test H1 and H2, mediation tests were conducted with the Model 4 of Process Macro Version 3 (Hayes, 2018). Standardized z scores of each variable were calculated and then used in the mediation tests. This study also examined how a Twitter user's attributes impact information dissemination. To test H3, a regression test was conducted with SPSS. Particularly, considering that the tweet dataset is not normally distributed and contains zero, cube root scores of each variable were calculated prior to conducting the regression test. The following attributes were the predictors examined in the linear regression: the number of other accounts that a Twitter user has followed, the sum of followers that a user has, the total number of tweets that a user has posted, and favorites that a user has received.

Results

The average reciprocated ratio of the crisis information network surrounding Hurricane Irma was .02. The average geodesic distance was 5.44 and the network density (graph density) was $7.47358\text{E-}05$. The top 10 influential users in the information network were identified based on betweenness centrality (See Table 2). The largest betweenness was 25,551,947.96. Among the top 10 influential actors, two were official agency accounts and five were users who demonstrated media backgrounds. United States President Donald Trump's Twitter account was the fourth most influential user in terms of his central status in the network (betweenness centrality is 12,944,744.83). Compared to other influential users, President Trump's account showed the most in-degree links (865). However, it had zero out-degree links in the current study's sample.

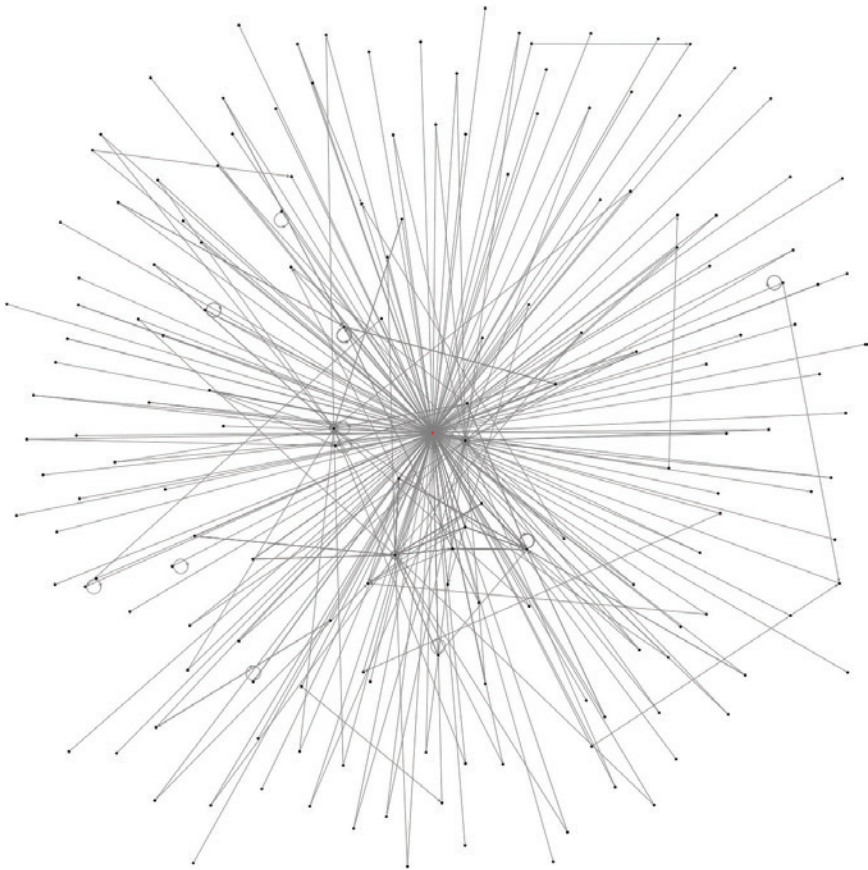
Regarding RQ2, this study identified 773 subgroups. The top three subgroups that contained the most edges were identified. The largest subgroup contained 4,773 edges including the fifth most influential user in the network. The second-largest subgroup had 3,684 edges including the official Twitter account of the Federal Emergency Management Agency (FEMA). The third-largest subgroup involved 3,078 edges, such as the Twitter accounts of President Trump, Fox News, and New York News. It is worth mentioning that the official Twitter account of the National Weather Service Miami—South Florida was in a group with only two edges.

TABLE 2 Top 10 Influential Actors in the Hurricane Irma Information Network (September 1 to September 14, 2017)

User ID	Profile Description	In-Degree	Out-Degree	Betweenness
4williamlewis	Radio host, social media whiz, political consultant	0	261	25,551,947.96
4billlewis	Former AM talk show host	2	247	22,293,112.15
Rebschmdt	Political freelancer, previously an online editor	745	1	15,265,799.82
Potus	President Trump	858	0	12,944,744.83
Hsiglobal	Humane Society International	90	1	11,667,847.63
Miketheiss	National Geographic Photographer & Storm Chaser	469	3	11,513,647.44
2jenniferlewis	Been suspended	0	76	10,332,601.08
4rickstaly	A graduate of the FBI National Academy, law enforcement	0	74	10,168,626.99
marishkamistry	WWF Member & Animal Rights Campaigner	0	2	9,301,017.14
Duvalschools	Duval County Public Schools	342	1	8,051,535.68

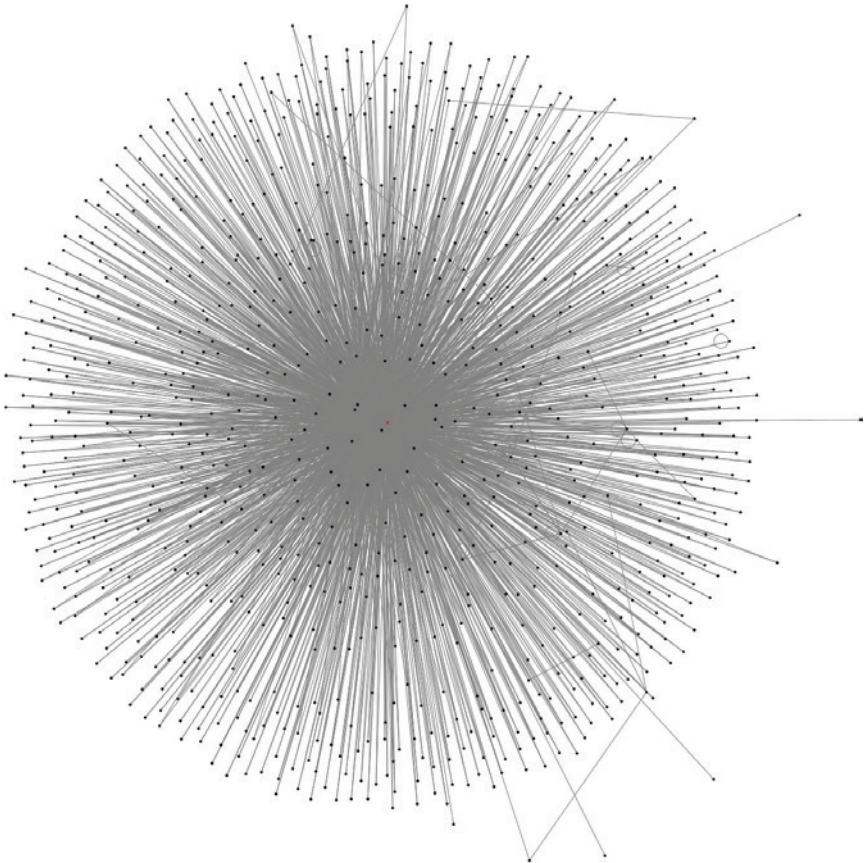
This study discovered the communication patterns of subgroups by conducting subgraphs in NodeXL Pro (Smith et al., 2010). Figure 1 shows the position of FEMA’s Twitter account in the second-largest subgroup. Specifically, FEMA’s account had 167 in-degree links, two out-degree links, and its betweenness centrality was 4,883,617.58 with a clustering coefficient of 0.004. At the time of data collection, FEMA had followed 640 Twitter accounts with 675,144 followers; it had posted 12,884 tweets and received

FIGURE 1 FEMA's Status in the 2nd Largest Subgroup/Subgraph.



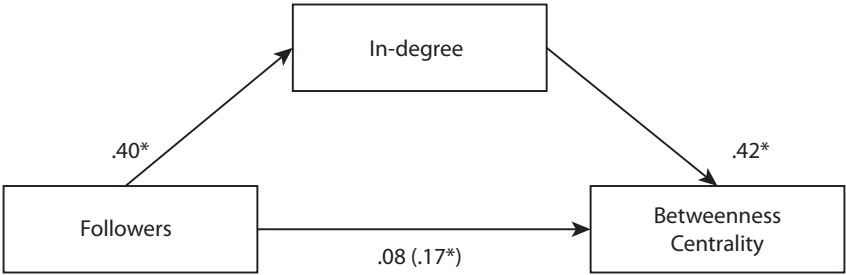
2,534 favorites. Figure 2 presented the status of President Trump's Twitter account in the third-largest subgroup. President Trump's account had 858 in-degree links, zero out-degree links, and the betweenness centrality was 12,944,744.83 with a clustering coefficient of 0.002. At the time the dataset was collected, President Trump's account had followed 42 other accounts and had been followed by 20,263,131 accounts. He had posted 1,169 tweets and received 84 favorites.

FIGURE 2 President Trump's Status in the 3rd Largest Subgroup/ Subgraph.



The correlations between all variables were provided in Table 3. The correlation between the number of tweets and favorites presented the largest effect size (.58). H1 was supported. The number of followers a user has showed a significant indirect impact on the user's betweenness centrality through in-degree links, $b = .17$, 95% CI [.1462, .1996] (Figure 3). In addition, the regression relationship between followers and in-degree links was positive and statistically significant ($\beta = .40$, $t(16625) = 19.61$, $SE = .02$, $p < .05$). Both in-degree links ($\beta = .42$, $t(16624) = 20.21$, $SE = .02$, $p < .05$) and the number of followers ($\beta = .08$, $t(16624) = 5.23$, $SE = .01$, $p < .05$) significantly predicted a Twitter user's betweenness centrality.

FIGURE 3 Standardized Regression Coefficients for the Relationship between the Number of Followers and the Betweenness Centrality as Mediated by In-degree Links.



*Note: The indirect effect coefficient is in parentheses. * $p < .05$.*

H2 was not supported. There was no statistically significant mediation impact of out-degree on the number of accounts a user followed and the betweenness centrality: $b = .00$, 95% CI $[-.0053, .0005]$. Moreover, no statistically significant linear relationship was found between the number of accounts that a user has followed and the number of out-degree links that a user has shown: $\beta = .00$, $t(16625) = -.50$, $SE = .01$, $p = .62$. Interestingly, both out-degree links ($\beta = .36$, $t(16624) = 49.45$, $SE = .01$, $p < .05$) and the number of accounts that a user has followed ($\beta = .02$, $t(16624) = 3.30$, $SE = .01$, $p < .05$) were found to show statistical significance of predicting betweenness centrality.

H3 was partially supported. The number of followers ($\beta = .23$, $t(16622) = 28.64$, $p < .05$) and tweets ($\beta = .04$, $t(16622) = 4.32$, $p < .05$) both showed positive and statistically significant relationship with betweenness centrality in the information network of Hurricane Irma. In particular, the number of followers showed a medium effect size ($\beta = .23$). The number of favorites that the user has received was negatively related to the user's betweenness centrality in the information network ($\beta = -.02$, $t(16622) = -2.31$, $p < .05$). However, the number of other accounts that a user has followed did not show statistical significance in predicting betweenness centrality (see Table 4).

TABLE 4 Regression of Attributes and Betweenness Centrality

	β	t	p
Constant		6.75	.00
Favorites	-.02	-2.31	.02
Followed	.01	.92	.36
Followers	.23	28.64	.00
Tweets	.04	4.32	.00

Discussion

By conducting a social network analysis with tweets about Hurricane Irma that were posted during the crisis period, this study explores patterns of crisis communication and information flow. Inspired by the opinion leader perspective and the two-step flow of communication theory (Katz & Lazarsfeld, 1955), as well as the SMCC model (Jin & Liu, 2010), the study examines the multiple facets of information influentials and investigates how influentials impact information flow. It identifies the top 10 influential actors based on their betweenness centrality and analyzes the impacts of a user’s social attributes (e.g., followers, following, tweets, favorites) on the user’s bridge influence. The findings suggest that the crisis information network remains dispersed and information is largely shared within smaller subgroups.

Numerous studies have examined how message formats impact the frequency of being retweeted (e.g., Lachlan et al., 2014; Lovejoy et al., 2012). However, the broad picture of crisis information flow remains unclear. This study enriches the crisis communication literature by (1) further exploring the bridge influence during the crisis information dissemination on social media, (2) identifying the top 10 influentials in a crisis information network, (3) examining the relationship between social media attributes and bridge influence levels (betweenness centrality), and (4) unpacking crisis information and dissemination patterns.

Bridge Influence, Information Flow, and Crisis Communication

This study returns attention to the original definition of influence proposed in the argument of opinion leaders and the two-step flow hypothesis (Katz & Lazarsfeld, 1955; Merton, 1968; Watts & Dodds, 2007). The existing social-mediated crisis communication research tends to inconsistently conceptualize and operationalize influence across studies. For example, some studies assess influence based on the number of followers (Cha et al., 2010; Wu et al., 2011), while ignoring these actors' influence over controlling information flow. Facing this challenge, this study intrinsically concentrates on the bridge influence that is evaluated based on a Twitter user's ability to connect others with the shortest path in the network: betweenness centrality.

One unique contribution of this study is to use social network analysis to assess influence, which adds a new approach to opinion leaders and information flow research. Previous research has utilized various ways to measure influence, such as the number of followers, frequency of being retweeted, and in-degree links (e.g., Cha et al., 2010; Lovejoy et al., 2012; Wu et al., 2011). These measures indeed reflect partial aspects of influence. Nevertheless, the key features of influence are understudied, that is, the influencer's capacity to generate information as the SMCC model (Jin & Liu, 2010) hypothesized and/or to intermediate information flow as the opinion leaders argument posited (Katz & Lazarsfeld, 1955; Merton, 1968; Watts & Dodds, 2007). This study pays attention to the control of information dissemination and evaluates Twitter users' influence levels based on betweenness centrality. This study argues that betweenness centrality reflects a user's role as an information bridge during the information dissemination process.

Characteristics of Influentials

As opinion leaders in a crisis information network, influential Twitter users showed the following characteristics: demonstrating media backgrounds, having a large number of followers, having posted many tweets, and presenting more connections with other users (e.g., attracting more links pointing inward from others and/

or generating more links to reach other users). In this study's sample, influential Twitter users present the ability to be information resources and directly control information flow.

This study identifies the top 10 influential users in the information network of Hurricane Irma. The finding suggests that ordinary citizens with media backgrounds are active on social media. These social media users have the ability to distribute information online. Federal official accounts, such as the National Weather Service, are not as active as some individual accounts, which echoed previous studies (Lachlan et al., 2014; Lin, Spence, et al., 2016). Non-elites can be opinion leaders who connect their community with information. Being media outlets or journalists is not the premise of being opinion leaders. Presenting media skills, instead, helps ordinary users become opinion leaders. As shown in this study's sample, many top influential Twitter accounts rarely seek out information (fewer out-degree links), such as President Trump. However, they are often seen as an information provider. This finding suggests that social media influentials can directly generate and spread information as the SMCC model (Jin & Liu, 2010) proposed, a contrast to Katz and Lazarsfeld's (1955) argument that highlights opinion leaders' role of intermediating the flow between mass media and the public. Indeed, this finding needs to be further examined in the future because this study only analyzes visible information interactions and does not examine the content of information.

Social Media Attributes and Bridge Influence

This study also further explains the relationship between a user's social media attributes and the user's bridge influence. During the process, the study analyzes the multifaceted characteristics of influence, such as having followers, being knowledgeable, being seen as experts, and being in a central position to exert influence (see Dubois & Gaffney, 2014). The study's findings emphasize the importance of analyzing opinion leaders' positions within a network to capture the patterns of information flow.

This study identifies how a Twitter user's social media attributes predict the user's bridge influence—the extent to which the

user can connect to others with the shortest path (betweenness centrality). According to the mediation analysis results, the number of followers directly impacts bridge influence. It also indirectly predicts bridge influence through in-degree links that are the number of links pointing inward and reflect the degree to which others come to the specific user for information. Both the number of followers and in-degree links predict a user's central status in the information network about Hurricane Irma. Contrary to previous research in which a large number of followers was not related to successful information dissemination (Cha et al., 2010), this study finds that when a Twitter user has more followers, the user is more likely to be seen as an information provider (reflected by showing more in-degree links). The correlation between followers and in-degree links is positive and the effect size is moderate. Compared to the number of followers, a Twitter user's ability to control information flow is more correlated to in-degree links. The complex findings may suggest that the impact of followers on a user's influence levels may not be oversimplified by the number of followers; instead, the user's chances of being reached by others (in-degree links) play a more important role in shaping the user as an information bridge. If only a few followers came to a user for information, the user would not exert a considerable influence on the information flow.

In this study's data, even though both out-degree links and the number of following (accounts that a user has followed) impact the user's ability to serve as an information bridge, out-degree links do not mediate the relationship between the number of following and the betweenness centrality. Moreover, compared to the number of following, out-degree links explained more variances in the user's control of information flow. The correlation between the number of following and the betweenness centrality is weak. The complex results indicate that a user's ability to seek information from other users essentially predicts the user's central position in the network.

Consistent with the previous research (Kim, 2017), this study also shows that the number of following is not associated with out-degree links. This finding suggests that even if a user has followed many accounts on Twitter, the user does not necessarily

reach out to look for crisis information (out-degree links). Instead, previous studies indicate many people tend to use social media for emotional support and involvement (Austin et al., 2012; Lachlan et al., 2014). Some Twitter users may not treat other accounts as the primary and credible resource to seek crisis information. Another possible interpretation is that even if a Twitter user has followed many accounts, this user does not necessarily read accessible posts. Only if a user actively seeks information on Twitter, will the user spread information. In addition, Twitter algorithms may impact the individual user's access to specific information, which requires further examination in the future.

To delve into the relationship between Twitter accounts' social media attributes and their influence levels, this study includes all Twitter accounts in the analysis rather than only analyzing the top 10 influentials' characteristics. This study examines how a user's influence in disseminating information is impacted by the number of the user's followers, following, tweets, and favorites. The latter two factors have been largely ignored by previous studies (e.g., Kim, 2017; Sadri et al., 2017).

In this study's sample, the number of followers and the total number of tweets a user posted positively impact the user's bridge influence in the network. In particular, the number of followers presents the strongest prediction among social media attributes. Even though the number of favorites that the user has received is shown to negatively affect a user's betweenness centrality, this small effect requires further examination in the future. The findings suggest that when one Twitter user has more followers and posts more tweets, the user will exert a stronger influence in distributing information. This study suggests that being knowledgeable and having followers are two important features of being an influential, which partially supports the opinion leader argument (Dubois & Gaffney, 2014; Katz & Lazarsfeld, 1955). Previous studies have contradictory findings regarding whether the number of followers shapes a user as an influential (e.g., Cha et al., 2010; Kim, 2017; Sadri et al., 2017; Zhao et al., 2018). The current study also clarifies the relationship between the number of followers and being influential in a crisis information network.

The Crisis Communication and Information Network Surrounding Hurricane Irma

This study aims to unpack crisis complexity by conducting a social network analysis with real-time data. The complexity of crises brings more challenges for crisis managers and public relations practitioners. The common approaches using limited samples (e.g., content analysis of tweets, exploring the linear relationship between tweets' format and retweets) may have difficulty fully understanding the chaotic systems of crises. Responding to the challenge, this study collects large and real-time data with NodeXL (Smith et al., 2010).

This study suggests that crisis information is largely shared within some subgroups. The network of crisis communication surrounding Hurricane Irma remains dispersed. The information exchange among Twitter users at a broad level remains insufficient and the communication pattern is mainly one-way. This is consistent with Sadri et al. (2017) while it is contrary to Kim's (2017) findings. The possibility of spreading information across the network remains limited by subgroup boundaries. People still have difficulty with breaking such a boundary. This finding may also suggest that, to some extent, an individual's selection of an online network may match one's offline network in reality. Hence, individuals still cannot break the network border online as they experience it in real-life. Scholars can further examine such network boundaries of information dissemination in the future.

The current study's insights provide implications for theory building in crisis communication, opinion leader, and information flow research. The knowledge helps crisis management practitioners achieve the following goals: promptly monitoring information flow on social media, building effective crisis communication, disseminating accurate information, and reducing the public's uncertainties. Identifying the communication and information flow on social media will assist crisis management institutions (e.g., National Weather Services, FEMA, and state governments) to be aware of the public's concerns and correct any misinformation in a timely manner. Understanding the characteristics of the information network and influentials can help crisis management institutions improve their accounts' visibility

and better connect to target audiences. Relevant organizations, officials, and concerned individuals can also learn how to build bridge influence to disseminate accurate information, which helps mitigate the public's uncertainty.

Limitations

As a pilot study exploring crisis communication patterns and information dissemination, this paper has several limitations. This study cannot explore the potential impacts of mass media behind the scenes. For instance, some influential Twitter users may be exposed to and impacted by mass media, and hence they may not be an actual "information source."

Moreover, this study only explores communication patterns and information dissemination on one social media platform during the crisis period. It does not examine the information flow across different crisis stages and on various media platforms. Like previous research, this study also merely examines the number of information sources rather than the quality and credibility of information sources. Researchers can further examine how the quality of information posted by influential actors impact their ability to control the information flow.

Finally, this study only includes three edge types: tweets, mentions (retweets are categorized into mentions), and replies. It does not examine the edge type of "follows" due to the limitation of data collection. Having the last edge type may provide insights regarding why some subgroups are formed and why some actors are isolated in the network. Future research would be needed to compensate for these limitations.

Future Directions

This study provides some useful insights for future research. First, as discussed earlier, in this study, non-elites show the ability to spread information and impact information dissemination. Many social media influentials can directly guide information flow. Social media allows ordinary users to be information providers. Traditional mass media is no longer the only choice for information seekers. Further research is needed to examine the two-step

flow of communication hypothesis in a social media environment. This study also suspects that the quality and credibility of information sources may impact individuals' crisis information-seeking on social media. More empirical studies in this field will be needed.

Moreover, previous research largely focused on social media usage during pre-crisis and crisis periods (Lachlan et al., 2014; Spence et al., 2015). It will be helpful to examine how information disseminates across pre-crisis, crisis, and post-crisis and how such communication patterns and information flow of each crisis change across different periods.

Last, whereas crisis communication and public relation studies emphasize the importance of synchronizing crisis information across channels, few theories explain and guide organizations to strategically coordinate communication across traditional media, social media, and interpersonal channels. This gap becomes more important given that social media is increasingly being used along with traditional public relations tools. Future research would be needed to examine information flow across traditional media, various social media platforms, and interpersonal communication channels.

Conclusion

For theoretical development, this study sheds light on information flow, the argument of opinion leaders, and social-mediated crisis communication research. It offers multiple insights for future research and practice. The current study unpacks the crisis information and dissemination patterns by conducting a social network analysis. It explores the Twitter users' bridge influence to identify the crisis information flow on social media. Moreover, it further examines how a Twitter user's social media attributes (followers, following, tweets, and favorites) impact the user's position in the network and the ability to control information dissemination. This study identifies the top 10 influential actors by calculating betweenness centrality. The knowledge provides implications for researchers to further examine the argument of opinion leaders

(Katz & Lazarsfeld, 1955) in a social media context and refine the theory development in crisis influence.

This study finds that demonstrating media backgrounds, showing more connections with other users, and having a large number of followers and tweets will predict one Twitter user's ability to control information flow. The current study's findings also indicate that crisis information is shared within subgroups and crisis communication remains dispersed. These patterns suggest crisis communication and information exchange are limited by the online network boundary. Such knowledge will also help guide emergency management practitioners, government officials, and other authorities to share accurate information and provide immediate responses on social media.

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References

- Austin, L., Liu, B. F., & Jin, Y. (2012). How audiences seek out crisis information: Exploring the social-mediated crisis communication model. *Journal of Applied Communication Research*, 40(2), 188–207. <https://doi.org/10.1080/00909882.2012.654498>
- Bakshy, E., Hofman, J. M., Mason, W. A., & Watts, D. J. (2011). Everyone's an influencer: Quantifying influence on Twitter categories and subject descriptors. *Proceedings of the Fourth ACM International Conference on Web Search and Data Mining* (pp. 65–74). <https://doi.org/10.1145/1935826.1935845>
- Bandyopadhyay, S., Rao, A. R., & Sinha, B. K. (2011). One introduction to social network analysis. In S. Bandyopadhyay, A. R. Rao, & B. K. Sinha (Eds.), *Models for social networks with statistical applications* (pp. 1–29). Sage Publications, Inc.

- Borgatti, S. P., Mehra, A., Brass, D. J., & Labianca, G. (2009). Network analysis in the social sciences. *Science*, 323(5916), 892–895. <https://doi.org/10.1126/science.1165821>
- Cangialosi, J. P., Latto, A. S., & Berg, R. (2018, June 30). Hurricane Irma (AL112017) tropical cyclone report. *National Hurricane Center*. Archived at https://web.archive.org/web/20180613160921/https://www.nhc.noaa.gov/data/tcr/AL112017_Irma.pdf
- Cha, M., Haddadi, H., Benevenuto, F., & Gummadi, K. P. (2010). Measuring user influence on twitter: The million follower fallacy. *ICWSM*, 10, 10–17.
- Dubois, E., & Gaffney, D. F. (2014). The multiple facets of influence: Identifying political influentials and opinion leaders on Twitter. *American Behavioral Scientist*, 58(10), 1260–1277. <https://doi.org/10.1177/0002764214527088>
- Freeman, L. C. (2004). *The development of social network analysis: A study in the sociology of science*. Empirical Press.
- Hansen, D. L., Schneiderman, B., & Smith, M. (2011). *Analyzing social media networks with NodeXL: Insights from a connected world*. Morgan Kauffman.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). The Guilford Press.
- Issa, A., Ramadugu, K., Mulay, P., Hamilton, J., Siegel, V., Harrison, C., Campbell, C. M., Blackmore, C., Bayleyegn, T., & Boehmer, T. (2018). Deaths related to Hurricane Irma—Florida, Georgia, and North Carolina, September 4–October 10, 2017. *Morbidity and Mortality Weekly Report*, 67(30), 829–832. <https://doi.org/10.15585/mmwr.mm6730a5>
- Jin, Y., & Liu, B. F. (2010). The blog-mediated crisis communication model: Recommendations for responding to influential external blogs. *Journal of Public Relations Research*, 22(4), 429–455. <https://doi.org/10.1080/10627261003801420>
- Katz, E., & Lazarsfeld, P. F. (1955). *Personal influence: The part played by people in the flow of mass communications*. The Free Press.

- Kim, J. (2017). How did the information flow in the #AlphaGo hashtag network? A social network analysis of the large-scale information network on Twitter. *Cyberpsychology, Behavior, and Social Networking*, 20(12), 746–752. <https://doi.org/10.1089/cyber.2016.0572>
- Lachlan, K. A., Spence, P. R., Lin, X., & Del Greco, M. (2014). Screaming into the wind: Examining the volume and content of tweets associated with Hurricane Sandy. *Communication Studies*, 65(5), 500–518. <https://doi.org/10.1080/10510974.2014.956941>
- Lin, X., Lachlan, K. A., & Spence, P. R. (2016). Exploring extreme events on social media: A comparison of user reposting/retweeting behaviors on Twitter and Weibo. *Computers in Human Behavior*, 65, 576–581. <https://doi.org/10.1016/j.chb.2016.04.032>
- Lin, X., Spence, P. R., Sellnow, T. L., & Lachlan, K. A. (2016). Crisis communication, learning and responding: Best practices in social media. *Computers in Human Behavior*, 65, 601–605. <https://doi.org/10.1016/j.chb.2016.05.080>
- Lovejoy, K., Waters, R. D., & Saxton, G. D. (2012). Engaging stakeholders through Twitter: How nonprofit organizations are getting more out of 140 characters or less. *Public Relations Review*, 38, 313–318. <https://doi.org/10.1016/j.pubrev.2012.01.005>
- Marken, G. A. (2007). Social media...The hunted can become the hunter. *Public Relations Quarterly*, 52(4), 9–12. <https://doi.org/10.1037/e380852004-038>
- Merton, R. K. (1968). Patterns of influence: Local and cosmopolitan influentials. In R. K. Merton (Ed.), *Social theory and social structure* (pp. 441–447). Free Press.
- Morris, M. R., Teevan, J., & Panovich, K. (2010). A comparison of information seeking using search engines and social media. *Proceedings of the 4th International AAAI Conference on Weblogs and Social Media* (pp. 291–294). Association for the Advancement of Artificial Intelligence.
- National Oceanic and Atmospheric Administration. (2017). [WPC surface analysis archive]. http://www.wpc.ncep.noaa.gov/archives/web_pages/sfc/sfc_archive_maps.php?arc-date=09/16/2017&selmap=2017091615&maptype=satsfcnp5

- National Weather Service. (2017). *Central Alabama impacts from Irma September 10–12, 2017*. http://www.weather.gov/bmx/event_irma2017
- Rainear, A. M., Lachlan, K., Odeldorf-Hirsch, A., & DeVoss, C. L. (2018). Examining Twitter content of state emergency management during Hurricane Joaquin. *Communication Research Reports*, 35(4), 325–334. <https://doi.org/10.1080/08824096.2018.1503945>
- Sadri, A. M., Hasan, S., Ukkusuri, S. V., & Cebrián, M. (2017). Understanding information spreading in social media during Hurricane Sandy: User activity and network properties. *CoRR*, abs/1706.03019. <https://arxiv.org/ftp/arxiv/papers/1706/1706.03019.pdf>
- Sin, S.-C. J., & Kim, K.-S. (2013). International students' everyday life information seeking: The informational value of social networking sites. *Library & Information Science Research*, 35(2), 107–116. <https://doi.org/10.1016/j.lisr.2012.11.006>
- Smith, M., Ceni A., Milic-Frayling, N., Shneiderman, B., Mendes Rodrigues, E., Leskovec, J., Dunne, C. (2010). NodeXL: A free and open network overview, discovery and exploration add-in for Excel 2007/2010/2013/2016. <https://www.smrfoundation.org>
- Sommerfeldt, E. J., & Kent, M. L. (2015). Civil society, networks, and relationship management: Beyond the organization—Public dyad. *International Journal of Strategic Communication*, 9(3), 235–252. <https://doi.org/10.1080/1553118x.2015.1025405>
- Spence, P. R., Lachlan, K. A., Lin, X., & Del Greco, M. (2015). Variability in Twitter content across the stages of a natural disaster: Implications for crisis communication. *Communication Quarterly*, 63(2), 171–186. <https://doi.org/10.1080/01463373.2015.1012219>
- Subbian, K., & Melville, P. (2011). Supervised rank aggregation for predicting influencers in Twitter. *Proceedings of the 2011 IEEE Third International Conference on Privacy, Security, Risk, and Trust (PASSAT)* (pp. 661–665). <https://doi.org/10.1109/passat/socialcom.2011.167>

- Sutton, J., Gibson, B. S., Spiro, E. S., League, C., Fitzhugh, S., Johnson, B., & Butts, C. T. (2015). What it takes to get passed on: Message content, style, and structure as predictors of retransmission in the Boston Marathon bombing response. *PLoS ONE*, 10(8), e0134452. <https://doi.org/10.1371/journal.pone.0134452>
- Treem, J. W., Leonardi, P. M., van den Hooff, B. (2020). Computer-mediated communication in the age of communication visibility. *Journal of Computer-Mediated Communication*, 25(1), 44–59. <https://doi.org/10.1093/jcmc/zmz024>
- Valente, T. W. (2010). *Social networks and health: Models, methods, and applications*. Oxford University Press.
- Valente, T. W., & Rogers, E.M. (1995). The origins and development of the diffusion of innovations paradigm as an example of scientific growth. *Science Communication*, 16(3), 242–273. <https://doi.org/10.1177/1075547095016003002>
- Watts, D. J., & Dodds, P. S. (2007). Influentials, network, and public opinion formation. *Journal of Consumer Research*, 34(4), 441–458. <https://doi.org/10.1086/518527>
- Weather Underground. (2017). *Hurricane Irma*. Archived at <https://web.archive.org/web/20170915153327/https://www.wunderground.com/hurricane/atlantic/2017/hurricane-irma?map=history>
- Weimann, G. (1994). *The influentials: People who influence people*. State University of New York Press.
- Whitten, S. (November 3, 2015). Twitter swaps ‘favorites’ for ‘likes’ and some users aren’t happy. *Consumer News and Business Channel*. Archived at <https://web.archive.org/web/20161030074410/https://www.cnbc.com/2015/11/03/twitter-swaps-favorites-for-likes-and-some-users-arent-happy.html>
- Wu, S., Hofman, J. M., Mason, W. A., & Watts, D. J. (2011). Who says what to whom on Twitter. *Proceedings of the 20th International Conference on World Wide Web* (pp. 705–714). <https://doi.org/10.1145/1963405.1963504>

- Zhao, X., Zhan, M. M., & Liu, B. F. (2018). Disentangling social media influence in crises: Testing a four-factor model of social media influence with large data. *Public Relations Review*, 44, 549–561. <https://doi.org/10.1016/j.pubrev.2018.08.002>
- Zhao, X., Zhan, M. M., & Liu, B. F. (2019). Understanding motivated publics during disasters: Examining message functions, frames, and styles of social media influentials and followers. *Journal of Contingencies and Crisis Management*, 27, 387–399. <https://doi.org/10.1111/1468-5973.12279>



The Tensions of Strategic Communication Decision-Making: An Exploratory Examination of Theory and Practice

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ABSTRACT

The Tensions of Strategic Communication Decision-Making (TSCD) is introduced as an applied theory describing the way decision-makers experience a risk or crisis and prioritize their strategic communication responses to maintain positive relationships with their publics. Relational Dialectics Theory is applied to illustrate how tensions between organizations and publics influence communication decisions. The strategic messages used by the World Health Organization regarding the *Zika* virus mega-crisis provide a backdrop illustrating how TSCD is enacted. Theoretical and practical implications for decision-making suggest that TSCD contributes to a more robust understanding of how the changing context in a crisis prompts the prioritization of strategic messages.

KEYWORDS: strategic communication, risk and crisis communication, decision-makers, dialectical tensions

When risk or crisis situations occur, organizations find themselves in the position of needing to respond. The means by which they choose to address these situations has been labeled risk or crisis communication. Broadly, communication scholars have identified and assessed the risk and crisis communication used by organizations to reestablish or improve their image to recover from crises. Coombs and Holladay (1996) proposed, and Coombs (2007, 2012, 2013) further developed, a typology (Situational

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Crisis Communication Theory), suggesting that if crisis types were identified in particular stages, and crisis managers understood the kinds of crisis situations they were experiencing, their risk and crisis communication could be matched to the crisis type to enhance effectiveness. Benoit (1997, 2015, 2018) introduced, and subsequently expanded upon, image restoration/repair as the means to identify the different ways an entity could frame their crisis response and assess its effectiveness. Additionally, scholars have focused on the identification and assessment of particular risk and crisis communication choices made by organizations in crisis (e.g., Fearn-Banks, 2016; Seeger & Ulmer, 2002; Sellnow et al., 2009; Ulmer et al., 2018; Weick, 1993).

As would be expected, responses embodying best practices (Seeger, 2006) were determined to have helped organizations effectively manage their risk or crisis situations (Reiersen et al., 2009; Seeger & Ulmer, 2002; Sellnow et al., 2009), while other research revealed ineffective communication choices resulting from a reliance on routine procedures, delayed response, or failure to take ownership, to name a few bad practices (e.g., Cummings, 1992; Farrell, 2015; Johnson, 2003). These and other studies analyzed risk and crisis situations after the fact and lacked a focus on the tensions that decision-makers within organizations experienced, no matter which communication strategy ultimately was chosen. This gap in addressing how decision-makers determine the communication strategies they choose to disseminate, and the call for “new approaches, theories, and insights about crisis and risk communication” (Liu, 2019, p. 9), is the focus of the present study exploring the processes of decision-making as a crisis situation unfolds.

The identification and interaction of tensions or choices for decision-makers, manifested in strategic messages created in response to risk or crisis situations, represents a discursive struggle, and is reflected in the prioritization of tensions through content. This discursive struggle reflects the change in prioritization within the strategic decision-making process that produces the communication disseminated from an organization as a crisis evolves. Understanding how decision-makers come to their choice of strategy is essential because it provides insight into the dynamic

context of a crisis as it moves from the pre-crisis phase to the post-crisis phase.

As such, the Tensions of Strategic Communication Decision-Making (TSCD) is introduced as an applied theory describing the way decision-makers experience a risk or crisis situation and prioritize the competing tensions shaping their strategic communication responses in order to maintain positive relationships between themselves and their publics. In this essay, the theoretical origins of TSCD are presented, followed by the tenets and conditions of TSCD. Using the strategic communication responses of the World Health Organization to the Zika virus, the utility of TSCD is revealed, followed by discussion and directions for future research.

Theoretical Grounding

Decision-Making

When a crisis presents itself, organizations and entities are confronted with a set of circumstances and must respond accordingly. The decision-makers in these circumstances can rely upon communication scholars to provide them with recommendations about what form of risk and crisis communication they should use to maximize their mitigation efforts. Reynolds and Seeger (2005) introduced Crisis Emergency Risk Communication as a model whereby publics could be educated, behaviors changed, information and warnings made, and publics ultimately would be prepared. Other scholars have offered similar strategies found to be successful in particular crisis situations (e.g., Avery, 2019; Bakker et al., 2019; Dowell, 2016; Stern, 2003), and have addressed the need for organizations to understand the kinds of crises they are confronting to select the matching persuasive tactics (Gribas et al., 2018). However, what has been lacking in these studies is a focus on the dynamics of the decision-making process, particularly what happens when the crisis changes after the initial communication strategy has been introduced.

Some argue that a crisis becomes a threat to an organization when its decision-makers have not anticipated the

situation (Hermann & Dayton, 2009; Stern, 2003). For example, if decision-makers anticipate a crisis, they will have more time to engage others and be innovative in their response. If there is no time, decision-makers will follow their reflexes and reach closure quickly about how to manage the crisis. What research has suggested is that instead of exploring a range of alternatives, policy-makers:

are more likely to focus on one or two options rather than to explore a range of possible alternatives . . . and are likely to become involved in a number of credibility traps that limit their effectiveness with the media and public. (Hermann & Dayton, 2009, p. 238)

There are organizational risks if policymakers fail to consider the decision-making process before a crisis emerges. Those who do not consider the dynamic nature of a crisis and the process of determining a range of strategic communication choices are more likely to be ineffective in maintaining positive relationships (Gribas et al., 2018). Research shows that decision-makers have strong cognitive biases (e.g., overconfidence, confirmation bias, and reliance on groupthink) that discourage them from thinking about risk and crisis situations until they happen (Kaplan & Mikes, 2012). These decision-makers run the risk of not being able to adjust their communication strategies as the situation changes because they have not considered their crisis response as a dynamic process (Boin et al., 2005).

Additionally, research has not explored what happens when crises change after an initial communication response has been implemented. Within risk and crisis communication, no theory or explanation identifies the interplay or forces affecting the decision-making process. Decision theory is closest to what is occurring within an organization as management and leaders are “counseling . . . to make the most effective decision” (Fearn-Banks, 2016, p. 19). The focus on identifying the communication strategies considered as best practices has neglected the matter of how the decision-makers arrived at decisions as they experienced the stages of the crisis.

Identification of Tensions

The Tensions of Strategic Communication Decision-Making (TSCD) evolved from Relational Dialectics Theory (RDT). As Baxter (1990) described, tensions represent oppositional forces in an interpersonal relationship (e.g., closedness-openness, autonomy-connection, predictability-novelty), whose interaction can enable the individuals involved to maintain the relationship over time. Baxter and Simon (1993) clarified: “The natural path for all relationships is one of pressure toward change which results from the dynamic tensions of simultaneous opposing forces” (p. 226). Simply put, as the dynamic of a relationship changes, both parties need to adjust behaviors for relational maintenance.

Regarding the current study, Baxter (2011) broadened the application of RDT to clarify that discourses include competing themes within the message. Thus, “objects of analysis are the discourses” (Baxter, 2011, p. 18). This characterization of discursive struggle and competing discourses suggests that tensions may be regarded as competing themes to be prioritized within the construction of a crisis message.

In contrast to interpersonal relationships, Mumby (2005) approached dialectical tensions by identifying the vantage point of oppositional forces as they appeared in organizational settings. He based his views on the work of scholars who established conditions by which the tensions and contradictions could be viewed interactively. As Mumby (2005) clarified: “With its focus on the indeterminacy of organizational meanings and practices, dialectics refuses a monologic reading that reifies practice as either resistant or dominant” (p. 38).

Mumby (2005) further extended RDT, examining its function in risk and crisis situations between organizations and their publics. These external relationships, “intersect in the moment to moment to produce complex and often contradictory dynamics of control and resistance” (Mumby, 2005, p. 21) and reflect similar oppositional forces, herein after referred to as tensions. These tensions manifest themselves when a risk or crisis occurs and present the decision-makers with a range of choices about how to respond. To explore these oppositional forces, Littlefield et al. (2012) identified

seven tensions affecting relationships between organizations and their publics when confronting risk and crisis situations. Littlefield and Sellnow (2015) called for further examination of the interaction of these tensions as a discursive struggle, as clarified by Baxter (2011) in the prioritization of the tensions within the ordering of the message.

The Use and Interaction of Tensions on Strategic Communication

In the context of risk and crisis communication, the relationship between an organization and its publics is maintained through strategic communication choices. As Seeger (2006) summarized, best practices are strategic choices found to be consistently helpful in navigating the relationship between organizations and their publics during risk and crisis events. However, our understanding of these best practices expands by contending that their selection and use does not occur randomly. Rather, such selection is prompted by the identification and prioritization of tensions that arise during a risk or crisis. What follows are two propositions and their undergirding conditions that make up the tenets of the TSCD.

Proposition 1. Risk and crisis situations prompt dialectical tensions for decision-makers seeking to prevent or mitigate harm to themselves, their organization, or to their publics.

Existing typologies reflect the model whereby risk and crisis situations occur, and organizations respond with communication strategies to mitigate the crisis. As an example, Coombs and Holladay (2002) demonstrated through SCCT that crisis types influence the selection of particular response strategies used to protect an organization's reputation. This view later enabled Coombs (2014), and other scholars, to determine the effectiveness of strategies, but offered little insight into how the decision-makers arrived at the strategies they ultimately used. Similarly, as the dynamics of a

crisis change, the initial strategy used by an organization may need modification. The introduction of dialectical tensions into the model enables the decision-maker to modify an initial response based upon the prioritization of these tensions.

Condition 1. Dialectical tensions prompted by the risk and crisis are identifiable, mutually exclusive, interactive, and measurable on continuums representing oppositional dimensions.

When crises occur, seven identifiable tensions emerge for decision-makers as they consider their responses (Littlefield et al., 2012). These tensions are mutually exclusive in that they utilize specific vocabulary pertaining to their point of focus. For example, timeliness pertains to the point in a crisis when the decision-makers weigh when to present information to various publics. Similarly, tensions are interactive because one tension may supersede another. It follows that the interaction of timeliness and level of certainty might play out in the case where a CEO delayed the timing of a press conference due to uncertainty about information confirming whether the organization was responsible for the crisis. Finally, the tensions are measurable on continuums representing oppositional dimensions (e.g., full or partial disclosure of information to little or no disclosure).

Condition 2. Tensions are not inherently prioritized for decision-makers in risk and crisis situations.

The presence of seven tensions does not prioritize their level of importance because each risk or crisis is unique. Thus, when a crisis occurs, all the tensions are present in no apparent order. Each of the tensions poses a question for the decision-makers that must be addressed. The nature of the crisis will influence the way decision-makers choose to prioritize content strategically in the construction of their messages. The prioritization of tensions constitutes what Baxter (2011) described as “the interplay of competing discourses” (p. 18).

TABLE 1 Seven Tensions for Strategic Communication Decision-Making

Dialectical Tension	Continuum Anchors	Description
Timeliness	Immediate to Never	Immediate: Messages are presented to publics upon learning information. Never: Messages are not presented after a period of time.
Amount of Information	Everything to Nothing	Everything: Available information is fully disclosed to publics. Nothing: Available information is kept from the publics.
Certainty of Information	Verified to Unverified	Verified: Organization expresses certainty of the information revealed to the publics. Unverified: Organization expresses uncertainty of the information revealed to the publics.
Interest	Self-interest to Concern for Others	Self-interest: Message reflects a focus on prioritizing the interests of the organization over the interests of the publics. Concern for others: Message reflects a focus on prioritizing the interests of the publics over the interests of the organization.
Control of the Narrative	Total Control to No Control	Total Control: Organization maintains control of the messages/ narratives in the media. No Control: There are multiple voices in the media.
Emotional Connection	Total Connection to No Connection	Total Connection: Messages reflect a level of full sensitivity to the publics. No Connection: Messages reflect no level of sensitivity to the publics.
Level of Responsibility	All to None	All: Organization claims full responsibility for the crisis. None: Organization denies responsibility for the crisis.

TABLE 2 Audience-Focused Best Practices, Tensions, and Questions to Consider

Best Practices	Tensions	Questions to Consider
Meeting the needs of the media Being accessible	Timeliness Amount of information Control of the narrative	When should the organization be releasing information about the crisis to the media and the public? How much information should the organization reveal to the media and the public? How much control of the crisis response narrative can the organization maintain through one or more spokespeople?
Accepting uncertainty and ambiguity Collaborating and coordinating with credible sources	Confidence in information	How certain is the organization about the information to be revealed to the public?
Hearing and understanding public's concerns Fostering partnerships	Prioritization of interest	Whose interest—the organization's or the public's—should be prioritized as the crisis is managed?
Pre-event planning and preparedness Viewing risk and crisis communication as process	Level of responsibility	How much responsibility should the organization take for causing the crisis?
Hearing and understanding public's concerns Being candid, open, and honest with the public	Emotional connection	How much of an emotional connection should the organization maintain with the public?

Condition 3. Tensions may cluster and intensify based upon the complexity of the crisis.

While condition 2 suggests that every crisis prompts the emergence of tensions for decision-makers, tensions may cluster, resulting in a discursive struggle for prioritization. For example, when information about a crisis becomes available, the amount of information to be presented and who should present the information may prompt prioritization. Later, once the decision-makers are more certain about the cause of the crisis, the tensions comprising level of responsibility, level of interest, and emotional connection may cluster to reflect the interplay of discourses necessary to demonstrate the level of concern expressed by the organization for the publics impacted by a crisis. These clusters may present themselves at any time during the management of the crisis as decision-makers navigate their relationship with various publics.

Proposition 2. Strategic communication responses enacted by organizations are outcomes of the dialectical tensions identified and prioritized by decision-makers and acted upon by publics in risk and crisis situations.

As risk and crisis situations occur, decision-makers have the capacity to frame how their messages are crafted in response to changing contexts. For example, Benoit's (2015) image repair typology provided a means by which messages could be created in order to frame how they would be received (e.g., mortification, corrective action). Depending upon the context, decision-makers make choices, like how Goffman (1974) characterized and prioritized primary and social frameworks.

McCombs and Shaw (1972) labeled this prioritization process for the mass media as "the agenda-setting function" (p. 176). Through agenda-setting, the media not only provide information (primary framework) for the publics, but also through their placement of the information (social frameworks), determine its importance. Similarly, in the context of risk and crisis, decision-makers have the capacity to frame how their strategic messages are crafted for publics in response to changing contexts. It is in response to how publics respond to messages that Perelman and

Olbrechts-Tyteca (1958/1971) identified the presence of universal and particular audiences. They suggested that with multiple publics, decision-makers must be conscious about how their messages may be perceived by all publics to determine their effectiveness.

Condition 4. The perceptions of decision-makers about the prioritization of competing discourses may shift during a crisis resulting in an interpenetration of tensions reflecting the decision-makers' use of the central issue of power (dominant to marginal) to prioritize message content.

In the pre-crisis phase, strategic decision-makers may respond with messages to prevent or control a crisis from materializing. For example, to discourage people from spreading a contagious virus, public health decision-makers initially may use an interplay of the Surgeon General (prioritizing the control of the narrative) providing information (prioritizing the amount of information) demonstrating certainty about the relationship of wearing a mask and social distancing to the prevention of spreading the virus (prioritizing the level of certainty). However, once a virus has been detected within a population, public health officials may marginalize their earlier discourses that emphasized early prevention and treatment (prioritizing timeliness), suggesting ways to deal with the effects of the virus (prioritizing the level of interest), and showing sensitivity toward the patients and families of victims of the virus (prioritizing their emotional connection).

Condition 5. The utilization of the best practices of risk and crisis communication enhances public perceptions of the strategic communication and the management of the risk and crisis.

Seeger (2006) and others suggested that when organizations utilize best practices, the affected publics perceive their efforts more positively (McKnight & Linnenluecke, 2016; Veil et al., 2020). Thus, decision-makers may respond to the tensions by choosing, from among the best practices, those that are primarily audience-focused (Littlefield, 2013) (See Table 2). For example, being accessible to the media and publics is a best practice associated with timeliness, amount of information, and level of certainty.

Being empathetic and sincere with publics is associated with the focus of interest and emotional connection.

Condition 6. The relational intent of the decision-makers toward publics modifies the prioritization of tensions and the implementation of strategic communication choices.

This condition presents itself when risk or crisis decision-makers initially may have chosen a communication strategy not well-received by publics. For example, decision-makers may not have prioritized the importance of controlling the narrative at the start of the crisis, allowing for the emergence of multiple spokespersons presenting conflicting information. Upon perceiving the deteriorating support of their position with affected publics, decision-makers may later prioritize the controlling of the narrative and identify one credible and respected authority to speak on their behalf.

These propositions and conditions constitute the Tensions of Strategic Communication Decision-Making (TSCD) and suggest that decision-makers identify particular tensions, prioritize the tensions within the themes of the discourse based upon the context of the risk or crisis situation, and respond with strategic communication choices based upon their prioritization. This strategic communication may represent a broad range of choices, with effectiveness determined by how well the messages are received and measured by the publics involved.

Method

To illustrate the descriptive power of TSCD, a case study approach using a contemporary mega-crisis was identified. Case studies commonly are used when studying risk and crisis situations (Sellnow et al., 2009). Additionally, Baxter (2011) supported qualitative or interpretive methods as appropriate to examine “the interplay of competing discourses” (p. 18) and called on researchers studying RDT to use “a variety of methods to understand both the culture and the relational history in which a [text] is embedded” (p. 159).

Some scholars have described mega-crises as large-scale events or risks that may create significant, ongoing, and even existential

threats to communities, groups, and organizations (Helsloot et al., 2012; Yen & Salmon, 2017). The Zika crisis was identified as the mega-crisis in the present study for several reasons. First, the Zika virus crossed geographic boundaries (Romero, 2016). In addition, Zika constituted an international public health emergency. Prior to the Zika virus, it was only the fourth time the WHO had issued such a warning (previous alerts were for Ebola, Swine Flu, and Polio), and the first time for a mosquito-borne illness (Vickery, 2016). Finally, the Zika virus represented a threat due to the absence of immunity in the whole of Latin America and the Caribbean (Duffy & Brasileiro, 2016).

The Case

The selected crisis—the Zika virus and its effect on humans, and especially pregnant women—provided a backdrop for an illustration of how decision-makers strategically responded in a crisis. The contextual background for this study was drawn from a Lexis-Nexis search of several hundred newspapers, magazines, and other online sources, beginning when the virus was first detected in 1947 until February 2016 when a state of crisis was declared in several Latin American countries, as well as in several parts of the United States of America. A total of 136 news articles were selected by removing duplicates and including only those that specifically included information pertinent to the emerging 2016 Zika virus on the American continents.

Data Set

The data set included public communication messages designated as “Disease Outbreak News” by the WHO on its official website, as the Zika virus was emerging as a major health crisis from October 2015 to February 2016. Baxter (2011) described this type of data as dialogically expansive because of the multiple themes or discourses interacting within the messages over time. Twenty-four official reports were collected from the WHO website during this period, with paragraphs serving as the unit of analysis. The number of paragraphs in each message ranged from two to 16 ($M = 6$ paragraphs per message).

Procedures

The 24 WHO messages were ordered chronologically to reveal the progression of strategic communication responses. The paragraphs in each message were numbered sequentially (1, 2, 3 . . .) following the agenda-setting technique known as the inverted pyramid style of writing whereby the most important information is placed first in the news story (Harrower, 2012). Each paragraph was coded by two researchers to identify the presence and level of one or more tensions in its content, along with how the content of each paragraph revealed dialectical tensions associated with elements of the conditions in Propositions 1 and 2. The coders found 100% agreement (Neuendorf, 2002) on the identification of all tensions, with the exception of the level of responsibility. In that case, the coders initially found 70% agreement. Subsequently, through discussion of the different levels (e.g., individual, state) consensus was achieved.

Content was noted by specific descriptors and coded accordingly. For example, if the data specified, “we wanted to get this information out immediately to the publics,” the data were coded as prioritizing timeliness. If the data specified, “we are unsure at this time about the cause of the birth defects of children born of women who contracted the virus,” the data were coded as marginalizing the level of certainty.

The 136 news articles providing contextual information about Zika virus were read by the lead researcher multiple times to identify elements associated with the conditions in Proposition 2. Those articles directly quoting individuals or official spokespersons were identified and their remarks were chosen as exemplars reflecting public opinion as reported by the media.

Results

Proposition 1. Condition 1

Proposition 1 claims that risk and crisis situations prompt dialectical tensions for decision-makers seeking to prevent or mitigate harm to themselves or to their publics. To validate this proposition, Condition 1 suggests that dialectical tensions are identifiable,

mutually exclusive, interactive, and measurable on continuums representing levels of oppositional dimensions. The data revealed evidence of the seven tensions in all 24 messages, where they were found to be mutually exclusive as evident by coder agreement, interactive by virtue of multiple tensions being identified in one or more paragraphs, and oppositional.

Timeliness (Immediate to Never)

All 24 messages included the immediacy of timeliness in their first paragraphs by citing the specific date when WHO identified a case of Zika virus, with 83.33% of the messages being published within 9 days of the specific date identified in paragraph 1. For example, a message published on January 27 cited January 23 in paragraph 1 (difference of 4 days) as the date when Zika was detected.

Amount of Information (Everything to None)

Sixteen of the messages included some amount of content in one or more paragraphs about the Zika virus and/or ways to prevent exposure, while eight provided no background information (e.g., history of the virus, where Zika had been clinically identified) or mitigation strategies (e.g., what people should wear or do to avoid contracting the virus).

Certainty of Information (Verified to Unverified)

All 24 messages included indicators of certainty by mentioning laboratory confirmed or unconfirmed cases of Zika. Nineteen (70.16%) prioritized laboratory confirmation of Zika in paragraph 1, with an additional 10 messages providing certainty in paragraph 2. Four messages included paragraphs mentioning varying levels of uncertainty related to the Zika virus. For example, “despite reports of a potential association between Zika virus and microcephaly (e.g., a rare neurological condition where a baby’s head is much smaller than expected) and other neurological disorders, a causal relationship between these events has not yet been confirmed” (WHO, 2016a).

Control of the Narrative (Total Control to No Control)

All 24 messages included paragraphs with WHO pronouncements, protocol, plans, or other authoritative recommendations. For example, WHO controlled the narrative by being the agency receiving reports identifying detection of the Zika virus infections. The use of the phrase, “WHO recommends . . .” in more than half of the messages demonstrated the control WHO exercised regarding its strategic communication, and it was WHO that reported what was being done to counter or prevent the effects of Zika virus. One message referenced another agency—the Centers for Disease Control and Prevention (CDC)—as providing the confirmatory test to identify the presence of the Zika virus.

Level of Responsibility (All to None).

The messages included the identification of those entities who should be responsible for acting. Three messages prioritized the WHO as being responsible to oversee the detection and prevention activities of its member states and to provide technical orientation for appropriate pesticide use. Seventeen messages prioritized specific country governments (e.g., Brazil, Colombia, El Salvador) as being responsible to detect, prevent, and help with potential victims of the Zika virus. One message indicated that pregnant women were responsible for taking their own preventive action. Four messages did not place responsibility for action on any entity.

Focus of Interest (Self-Interest to Concern for Others).

In 23 of the messages, the content prioritized the focus of interest on those other than the decision-maker (WHO). In other words, the warnings were directed at potential victims of the Zika virus, particularly “people traveling to high risk areas, especially pregnant women,” young children, and the elderly (WHO, 2016a). Only one of the messages did not direct the focus of interest to self or others.

Emotional Connection (Total Connection to No Connection).

In this category, the identification of vulnerable groups, the use of language choices reflecting cultural sensitivity, and efforts to reach out to provide support for victims were prioritized in varying

degrees. Ten of the messages did not provide any mention of these elements. In fact, no emotional connection was offered in the first nine messages (October 21 to December 21, 2016) included in the data set. However, after this initial period, the subsequent 14 messages included varying levels of reference to vulnerable groups (especially pregnant women, children, and the elderly), areas of high risk (Central and South America), language sensitivity, and victim support.

Proposition 1. Condition 2

Condition 2 validates Proposition 1 by suggesting that responses to tensions are not inherently prioritized for decision-makers in risk and crisis situations. In the present study, content reflecting all seven tensions was found in the 24 messages under review. However, their prioritized placement varied in the messages as the spread of the virus increased. Specifically, when considering the content of the dominant discourses prioritized in the first paragraphs of the 24 messages, the following tensions were identified: Timeliness—100%, level of certainty—79%, level of responsibility—21%, amount of information—8%, and control of the narrative—4%. The discourses marginalized by omission in the first paragraphs included focus of interest and emotional connection. In contrast, even as the crisis progressed, the discourses associated with two tensions (control of the narrative—96% and focus of interest—33%) were marginalized until the last paragraphs of each of the 24 messages. Finally, the discourse associated with emotional connection consistently was marginalized to the final two paragraphs in 12 of the messages (50%).

Proposition 1. Condition 3

Condition 3 provides clarification for Proposition 1 by identifying that tensions cluster and change in priority prompted by the complexity of the crisis. The data revealed the clustering of tensions at all stages of the crisis under investigation. For example, at the beginning of the crisis, skepticism about the spread and implications of the Zika virus confronted decision-makers. This prompted the WHO to prioritize two tensions: getting the message out to

affected publics (timeliness) and providing verification that the Zika virus was being clinically detected (certainty). The dominance of these tensions prompted decision-makers to include up-to-date and scientifically confirmed content at or near the beginning of all 24 messages in the ongoing discourse of the WHO.

Because the priority for decision-makers was on timing and certainty, the emphasis on those groups being affected by the virus was marginalized by omission from the beginning of the messages. Thus, while the WHO messages always addressed the welfare of those who had contracted the Zika virus (focus of interest), the interplay of messages with specific references to vulnerable people (e.g., pregnant women, children born with microcephaly, people living in poverty) using culturally-sensitive strategies (emotional connection) took 2 months of changing contexts to become more prominent in the messages.

Proposition 2. Condition 4

Proposition 2 describes how the strategic communication responses enacted by organizations are prioritized by decision-makers and acted upon by publics in risk and crisis situations. In Condition 4, as the perceptions of decision-makers about the prioritization of tensions shifted, different strategic communication responses were enacted. For example, while the prioritization of immediacy resulted in the maintenance of a consistent communication strategy to get the information out as quickly as possible following the identification of the Zika virus in a particular area, the discourse associated with prioritizing the other-serving focus of interest shifted throughout the crisis.

In the pre-crisis stage, strategic communication responses were preventive. For example, following the WHO's prioritization, pre-crisis messages came in the form of general warnings or suggested prevention strategies: "Public Health Agency of Canada . . . recommends that pregnant women discuss any travel plans with their health care providers" (Ubelacker, 2016). Later, when the crisis grew in scope and people continued to travel to high risk regions, the messages became more explicit: "These steps include wearing insect repellent, using air conditioning or window and

door screens to keep mosquitoes outside, wearing long pants and long-sleeved shirts when possible, and emptying standing water inside and outside the home” (“Washington: CDC warns,” 2016).

Regarding the prioritization of information to reveal how the Zika virus spread, as scientists became more certain, more specific information was forthcoming and placed earlier in the messages. For example, the initial transmission of the Zika virus was traced to the bite of the *Aedes aegypti* mosquito. This prompted the prioritization of that content in the messages (13 messages included this content in the first half of the paragraphs) to “reduce the mosquitoes that transmit this disease” (WHO, 2015b). When it was later detected that Zika could be transmitted through sexual intercourse (WHO, 2016b), content was prioritized to identify methods of birth control (e.g., abstinence, use of condoms).

Proposition 2. Condition 5

Condition 5 explains how Proposition 2 is acted upon by publics because the utilization of best practices enhances public perceptions of the prioritized strategic communication in risk and crisis situations. In the present study, the uncertainty associated with the Zika virus and microcephaly illustrated this relationship. As the connection between the Zika virus and microcephaly became more certain, women who were pregnant or were anticipating pregnancy became more anxious, as the following statement demonstrated: “All of the women I see at the hospital or in my office who are pregnant or wanting to get pregnant are very alarmed, almost panicky” (“Brazil fears birth defects,” 2016).

The extreme reactions of women prompted decision-makers to prioritize strategic messages reflecting the best practices of hearing and understanding publics’ concerns (tensions of emotional connection and prioritization of interest) and accepting uncertainty and ambiguity (tension of confidence in information). The WHO prioritized the following specific strategies: “To provide self-efficacy for those at risk or already infected with the Zika virus” (WHO, 2015d); to address the presence or absence of certainty (WHO, 2015c); and by withholding total certainty about the link between the Zika virus and microcephaly (Goodhue, 2016).

By foregrounding content about the confirmation process for publics, decision-makers enacted the best practice of being candid, open, and honest. Through collaboration and coordination with the CDC, WHO prioritized content supporting its advisory warning that travel should be postponed for pregnant women, or women anticipating pregnancy, due to the risk of a relationship between the virus and the birth defect. These warnings were heard, and people's reactions were those of adherence (Umeha, 2016).

Proposition 2. Condition 6

Proposition 2 is understood further because in Condition 6 the relational intent of decision-makers with the publics modifies the interplay of tensions and the prioritization of strategic communication choices. In most cases, relational intent best can be described as helpful, hurtful, or neutral. Littlefield and Sellnow (2015) described these intents, suggesting that a neutral intent also may be hurtful when decision-makers do not respond to the tension of level of responsibility and take some form of action.

In the case of the Zika virus, all of the WHO messages except one prioritized a response to the tension of level of interest, with a focus on helping the publics to avoid contracting the virus and potentially affecting the health of unborn fetuses. In the one message where a neutral intent was coded, WHO identified geographic areas as the focus of interest, as the virus was "spreading geographically to previously unaffected areas" (WHO, 2016a).

Additionally, as the crisis intensified, the helpful content prioritized by the decision-makers shifted to respond to the potential health hazards for pregnant women and their unborn fetuses. For example, when prioritized content described the threat of the Zika as "virus consisting of mild fever, rash . . . , headaches, arthralgia, myalgia, asthenia, and non-purulent conjunctivitis, occurring three to twelve days after the mosquito vector bite" (WHO, 2015a), the discourses were designed to encourage women to delay or cancel travel to areas of risk. As more became known about the possible link between Zika and microcephaly, designing messages that prioritized the strategy of advising women to avoid pregnancy by abstinence or the use of contraceptives represented a more intrusive approach to controlling the spread of the

virus. This recommendation to avoid pregnancy was not valued universally, as it represented what decision-makers in the Catholic Church characterized as a hurtful intent (Partlow, 2016).

Discussion

The analysis of strategic communication decision-making during the Zika virus mega-crisis illustrates the utility of TSCD to enhance our understanding of the processes at work when decision-makers construct messages reflecting a discursive struggle during the ongoing phases of a risk or crisis event. The responses of WHO provided insight into how the crisis context likely influenced the prioritizing of messages reflecting the competing tensions. This application of TSCD provides theoretical and practical implications for scholars and risk and crisis decision-makers.

Theoretical Implications

This study fills a void in the literature by providing a clearer focus on the dynamics of the decision-making process in changing crisis situations after the initial communication strategies have been implemented. As Ha and Boynton (2014) suggested, the focus of research has rarely been on those who make the decisions even though crisis decisions are made by leaders in an environment of competing messages (Boin et al., 2005). By accounting for the tensions experienced by the decision-makers as they make sense of a crisis, this study contends that such an analysis reveals more clearly how organizational leaders prioritize the range of their communication choices when developing messages for different publics. In addition, a more robust understanding is possible regarding how strategic choices are made and modified throughout the phases of a crisis (Hermann & Dayton, 2009).

This unique application of the interpersonal relational dialectics theory to risk and crisis provides for a deeper understanding of how decision-makers must respond to a crisis as a dynamic event—whereby communication strategies must change as a result of changing circumstances—and organizations maintain or rebuild positive relationships with their publics. Through an

analysis of discursive messages prioritizing responses to prevent or mitigate a crisis, researchers can account for the prioritization and interplay of those tensions on changing messages as the crisis unfolds (Gribas et al., 2018).

The interplay of the competing discourses within messages and the necessary prioritization of decision-makers as they confront what Baxter (2011) labeled “turning points” or “moments of change” (p. 154), illustrate the complexity involved in the process of message creation in a dynamic context of crisis. Essentially, the changing crisis context prompts changes in the prioritization of discourses within the messages, just as the changing dynamics in an interpersonal relationship necessitate oppositional responses to alter the situation.

While the introduction of competing discourses prompts contradictory responses (Baxter, 2011), this study reinforces the position that competing discourses can be identified through content, and, thereby through placement, reflect the prioritization of the decision-maker for the publics. Through this interplay of the competing discourses, Baxter (2011) suggested that meaning is created. By focusing on the prioritization of discourses within risk or crisis messages, the processes of decision-making may be revealed more fully.

This study extends the theoretical understanding of decision-making by illustrating the dynamic discursive struggle of all seven tensions within the ongoing risk and crisis messages and the subsequent best practices used by decision-makers in risk or crisis contexts. Accepting Baxter’s (2011) broader characterization—that competing discourses within a message (e.g., tensions) may be the objects of analysis—enabled this study to use tensions as representations of discourses prioritized by decision-makers based upon where content addressing these tensions was placed within the messages. Particularly, the findings revealed the interactive nature of the tensions as their prioritization within the messages changed when the risk or crisis context moved through the crisis phases. By revealing the discursive struggle reflecting the prioritized tensions within the risk or crisis messages, this study helps scholars to understand the processes associated with decision-making within the changing context of a risk or crisis.

Practical Implications

This study offers several practical implications for risk and crisis communication scholars and decision-makers. Initially, TSCD provides a frame of reference for examining and organizing each of the seven tensions experienced by all decision-makers. In crisis situations, spokespeople such as Public Information Officers respond because, through communication, they can describe, interpret, and evaluate what is happening for their stakeholders and publics (Avery, 2019). Furthermore, understanding these tensions could help emergency managers and others develop crisis simulations and other drills to help better prepare crisis managers to communicate well during a crisis. As decision-makers create their strategic messages, they prioritize their competing discourses in the message based upon which tensions they perceive to be of greatest importance to the publics.

By using the continuums associated with each of the tensions, decision-makers prioritize the levels of openness or certainty, the amounts of information to share, and degrees to which they assumed responsibility, expressed concern, or directed their focus of interest. In addition, the interplay between the tensions is observable as the crisis evolves when certain tensions take precedence and are prioritized by the decision-makers in their strategic messages. By identifying tensions as discursive messages (Baxter, 2011), the TSCD theory provides clues regarding why particular best practices should be used when communicating about the phases of the crisis as the tensions cluster in different combinations.

Previous research in risk and crisis communication has retrospectively provided researchers and practitioners the opportunity to identify emerging best practices and to evaluate their effectiveness in preventing, mitigating, or renewing after crisis situations (e.g., Lachlan et al., 2018; Stewart & Young, 2018; Ulmer et al., 2018). In contrast, the utility of recognizing the tensions confronting decision-makers prior to the selection of particular best practices helps scholars to explore new aspects of risk and crisis communication as the prioritization of tensions shifts during crisis, producing interaction that may or may not make the adoption of particular best practices an option for future decision-makers.

Limitations and Directions for Future Research

This TSCD theory is exploratory and not without limitations. In this study, the identification of tensions of strategic communication decision-making about a mega-crisis came from written messages that were posted by the WHO on their website. While Baxter (2011) affirmed the study of “contrasting discourses . . . in spoken or written texts” (p. 152), to understand more robustly how decision-makers experience and prioritize tensions, scholars may learn more if they extend the parameters of the search, gathering responses from multiple mediums as a crisis unfolds and working directly with decision-makers (e.g., interviews, observations, or surveys).

A second limitation of this study is its single mega-crisis focus. While helpful in an exploratory way, TSCD’s applicability to a variety of different crisis contexts simultaneously would add value and veracity to its legitimacy. For example, the novel coronavirus COVID-19 in 2020 is a fertile area of study where politics, economics, sociology, education, and family systems offer numerous inter-related contexts whereby the prioritization and interplay of tensions could reveal a range of effective and ineffective communication strategies used by decision-makers in an attempt to retain or rebuild relationships with multiple publics. Similarly, TSCD could be used to analyze ongoing crises involving food safety, environmental security, domestic acts of violence, mass shootings, and many other social issues. The next step for researchers is to find ways to test the propositions and conditions, thereby confirming or disproving TSCD’s theoretical assumptions.

Finally, the impact of the cultural context in a crisis on publics responsiveness to strategic communication choices requires more robust examination. As such, within every crisis are cultural variables affecting the relationship between the decision-makers and their publics. How the decision-makers choose to strategically communicate with their publics in times of crisis will influence how their messages are received (Littlefield, 2013).

Conclusion

This exploratory study introduced an applied theory describing the processes associated with message creation by decision-makers in risk and crisis situations; identifying how the tensions present themselves, how they influence the prioritization of strategic communication responses, and how their interaction with best practices is affected by the context in which they are introduced. By being attentive to these inherent tensions, scholars and observers may better understand how their responses to manage complex and challenging risk and crisis situations may be more strategically utilized in the future.

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References

- Avery, E. J. (2019). The effects of community size, control over agenda, and contextual variables on Zika virus preparation of public information officers at local public health departments, *Journal of International Crisis and Risk Communication Research*, 2(1), 97–119. <http://doi.org/10.30658/jicrcr.2.1.5>
- Bakker, M. H., Kerstholt, J. H., van Bommel, M., & Giebels, E. (2019). Decision-making during a crisis: The interplay of narratives and statistical information before and after crisis communication, *Journal of Risk Research*, 22(11), 1409–1424. <http://doi.org/10.1080/13669877.2018.1473464>
- Baxter, L. A. (1990). Dialectical contradictions in relational development. *Journal of Social and Personal Relationships*, 7, 69–88. <https://doi.org/10.1177/0265407590071004>

- Baxter, L. A. (2011). *Voicing relationships: A dialogic perspective*. Sage. <https://doi.org/10.4135/9781452230344>
- Baxter, L. A., & Simon, E. P. (1993). Relational maintenance strategies and dialectical contradictions in personal relationships. *Journal of Social and Personal Relationships*, 10, 225–242. <https://doi.org/10.1177/026540759301000204>
- Benoit, W. L. (1997). Image restoration discourse and crisis communication. *Public Relations Review*, 23, 177–186. [https://doi.org/10.1016/s0363-8111\(97\)90023-0](https://doi.org/10.1016/s0363-8111(97)90023-0)
- Benoit, W. L. (2015). *Accounts, excuses, and apologies: Image repair theory and research* (2nd ed.). SUNY Press.
- Benoit, W. L. (2018). Crisis and image repair at United Airlines: Fly the unfriendly skies. *Journal of International Risk and Crisis Communication Research*, 1(1), 11–26. <https://doi.org/10.30658/jicrcr.1.1.2>
- Boin, A., t'Hart, P., Stern, E., & Sundelius, B. (2005). *The politics of crisis management: Public leadership under pressure*. Cambridge University Press.
- Brazil fears birth defects linked to mosquito-borne virus. (2016, January 6). The Maltese Independent. Archived at <https://web.archive.org/web/20180712121324/https://www.independent.com.mt/articles/2016-01-06/health/Brazil-fears-birth-defects-linked-to-mosquito-borne-virus-6736151313>
- Coombs, W. T. (2007). Protecting organizational reputations during a crisis. The development and application of SCCT. *Corporate Reputation Review*, 10, 163–176. <https://doi.org/10.1057/palgrave.crr.1550049>
- Coombs, W. T. (2012). *Ongoing crisis communication: Planning, managing, and responding* (3rd ed.). Sage.
- Coombs, W. T. (2013). Situational theory of crisis: Situational Crisis Communication Theory and corporate reputation. In C. E. Carroll (Ed.), *Handbook of communication and corporate reputation* (pp. 262–278). John Wiley.
- Coombs, W. T. (2014). State of crisis communication: Evidence and the bleeding edge. *Research Journal of the Institute for Public Relations*, 1(1). Archived at <https://web.archive.org/web/20150924123159/https://instituteforpr.org/wp-content/uploads/CoombsFinalWES.pdf>

- Coombs, W. T., & Holladay, S. J. (1996). Communication and attributions in a crisis: An experimental study in crisis communication. *Journal of Public Relations Research*, 8, 279–295. https://doi.org/10.1207/s1532754xjprro804_04
- Coombs, W. T., & Holladay, S. J. (2002). Helping crisis managers protect reputational assets: Initial tests of the situational crisis communication theory. *Management Communication Quarterly*, 16(2), 165–186. <https://doi.org/10.1177/089331802237233>
- Cummings, A. D. (1992). The Exxon Valdez oil spill and the confidentiality of natural resource damage assessment data. *Ecology Law Quarterly*, 19(2), 363–412. <https://www.jstor.org/stable/24113134>
- Dowell, J. (2016). Coordination of decision-making in crisis management. In P. Scott & G. Rogova (Eds.), *Fusion methodologies in crisis management: Higher level fusion and decision-making* (pp. 489–499). Springer. https://link.springer.com/chapter/10.1007/978-3-319-22527-2_23
- Duffy, J., & Brasileiro, A. (2016, January 23). Zika virus outbreak linked to World Cup. The Sunday Herald (Glasgow). Archived at <https://web.archive.org/web/20190806042427/https://www.heraldscotland.com/news/14226384.zika-virus-outbreak-in-brazil-linked-to-world-cup>
- Farrell, L. C. (2015). Tension of openness: An examination of Menu Foods organizational disclosure during the 2007 pet-food recall. In R. S. Littlefield & T. L. Sellnow (Eds.), *Risk and crisis communication: Navigating the tensions between organizations and the public* (pp. 39–56). Lexington Books.
- Fearn-Banks, K. (2016). *Crisis communications: A casebook approach* (5th ed.). Routledge. <https://doi.org/10.4324/9781315684857>
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Northeastern University Press. Reprinted 1986 by arrangement with Harper & Row.
- Goodhue, D. (2016, January 21). Local health officials wary of Latin America, Caribbean Zika Outbreak. FLKeys News: Tribune Content Agency. Archived at <https://web.archive.org/web/20200605140923/https://www.flkeysnews.com/news/local/environment/article79622427.html>

- Gribas, J., DiSanza, J., Legge, N., & Hartman, K. L. (2018). Organizational image repair tactics and crisis type: Implications for crisis response strategy effectiveness. *Journal of International Crisis and Risk Communication Research*, 1(2), 225–252. <https://doi.org/10.30658/jicrcr.1.2.3>
- Ha, J. H., & Boynton, L. (2014). Has crisis communication been studied using an interdisciplinary approach? A 20-year content analysis of communication journals. *International Journal of Strategic Communication*, 8(1), 29–44. <https://doi.org/10.1080/1553118X.2013.850694>
- Harrower, E. (2012). *Inside reporting: A practical guide to the craft of journalism* (3rd ed.). McGraw-Hill Companies, Inc.
- Helsloot, I., Boin, A., Jacobs, B., & Comfort, L. K. (Eds.). (2012). *Mega-crisis: Understanding the prospects, nature, characteristics and effects of cataclysmic events*. Charles C. Thomas Publishers, LTC.
- Hermann, M. G., & Dayton, B. W. (2009). Transboundary crisis through the eyes of policymakers: Sense making and crisis management. *Journal of Contingencies and Crisis Management*, 17(4), 233–241. <https://doi.org/10.1111/j.1468-5973.2009.00590.x>
- Johnson, C. (2003). Enron's ethical collapse: Lessons for leadership educators. *Journal of Leadership Education*, 2(1), 45–56. <https://doi.org/10.12806/v2/i1/c2>
- Kaplan, R. S., & Mikes, A. (2012, June). Managing risks: A new framework. *Harvard Business Review*, 90(6), n.p. Archived at <https://web.archive.org/web/20130424060432/https://hbr.org/2012/06/managing-risks-a-new-framework>
- Lachlan, K. A., Spence, P. R., Omilion-Hodges, L., Rice, R. G., & Brink, A. (2018). Responding to campus shootings: Two studies exploring the effects of sex and placement strategy on knowledge acquisition and organizational reputation. *Journal of International Crisis and Risk Communication Research*, 1(2), 83–110. <https://doi.org/10.30658/jicrcr.1.1.5>
- Littlefield, R. S. (2013). Communicating risk and crisis communication to multiple publics. In A. J. DuBrin (Ed.), *Handbook of research on crisis leadership in organizations* (pp. 231–251). Edward Elgar. <https://doi.org/10.4337/9781781006405.00021>

- Littlefield, R. S., Farrell, L., Beauchamp, K., & Rathnasinghe, S. (2012). *Maintaining relationships with the public: Applications of relational dialectics theory in crisis situations*. Paper presented at the meeting of the National Communication Association, Orlando, FL.
- Littlefield, R. S., & Sellnow, T. L. (Eds.). (2015). *Risk and crisis communication: Navigating the tensions between organizations and the public*. Lexington Books.
- Liu, B. F. (2019). The critical need for crisis and risk communication research. *Journal of International Crisis and Risk Communication Research*, 2(1), 7–11. <https://doi.org/10.30658/jicrcr.2.1.1>
- McCombs, M. E., & Shaw, D. L. (1972). The agenda-setting function of mass media. *The Public Opinion Quarterly*, 36(2), 176–187. <https://doi.org/10.1086/267990>
- McKnight, B., & Linnenluecke, M. K. (2016). How firm responses to natural disasters strengthen community resilience: A stakeholder-based perspective. *Organization & Environment*, 29(3), 290–307. <https://doi.org/10.1177/1086026616629794>
- Mumby, D. K. (2005). Theorizing resistance in organizational studies: A dialectical approach. *Management Communication Quarterly*, 19(1), 19–44. <https://doi.org/10.1177/0893318905276558>
- Neuendorf, K. A. (2002). *The content analysis guidebook*. Sage.
- Partlow, J. (2016, January 24). Women warned over Zika outbreak. The Washington Post. Archived at <https://web.archive.org/web/20160124090653/http://www.scmp.com/news/world/article/1903987/women-warned-over-zika-outbreak>
- Perelman, C., & Olbrechts-Tyteca, L. (1958/1971). *The new rhetoric: A treatise on argumentation* (J. Wilkinson & P. Weaver, Trans.). Notre Dame University Press.
- Reiersen, J. L., Sellnow, T. L., & Ulmer, R. R. (2009). Complexities of crisis renewal over time: Learning from the case of tainted Odwalla apple juice. *Communication Studies*, 60, 114–129. <https://doi.org/10.1080/10510970902834841>
- Reynolds, B., & Seeger, M. W. (2005). Crisis and emergency risk communication as an integrative model. *Journal of Health Communication Research* 10(1), 43–55. <https://doi.org/10.1080/10810730590904571>

- Romero, S. (2016, January 2). In Brazil, epidemic of malformed infants; Government suspects Zika virus of causing microcephaly in babies. News (p. 6). Retrieved from www.lexisnexis.com
- Seeger, M. W. (2006). The ten best practices of risk and crisis communication. *Journal of Applied Communication Research*, 34(3), 232–244. <https://doi.org/10.1080/00909880600769944>
- Seeger, M. W., & Ulmer, R. R. (2002). A post-crisis discourse of renewal: The cases of Malden Mills and Cole Hardwoods. *Journal of Applied Communication Research*, 34(2), 126–142. <https://doi.org/10.1080/00909880216578>
- Sellnow, T. L., Ulmer, R. R., Seeger, M. W., & Littlefield, R. S. (2009). *Effective risk communication: A message-centered approach*. Springer.
- Stern, E. K. (2003). Crisis studies and foreign policy analysis: Insights, synergies, and challenges. *International Studies Review*, 5(2), 183–202. <https://doi.org/10.1111/1521-9488.5020016>
- Stewart, M. C., & Young, C. (2018). Revisiting STREMI: Social media crisis communication during Hurricane Matthew. *Journal of International Crisis and Risk Communication Research*, 1(2), 279–302. <https://doi.org/10.30658/jicrcr.1.2.5>
- Ubelacker, S. (2016, January 14). Spreading mosquito-borne virus may pose pregnancy risk: researchers. The Record. Archived at <https://web.archive.org/web/20200605003137/https://www.therecord.com/news/world/2016/01/14/spreading-mosquito-borne-virus-may-pose-pregnancy-risk-researchers.html>
- Ulmer, R. R., Sellnow, T. L., & Seeger, M. W. (2018). *Effective crisis communication: Moving from crisis to opportunity* (4th ed.). Sage.
- Umeha, C. (2016, February 9). What does the Zika virus mean for travel? Daily Independent (Nigeria). Archived at <https://web.archive.org/web/20190527074400/https://www.independent.ng/zika-virus-mean-travel-forbes>

- Veil, S. R., Anthony, K. E., Sellnow, T. L., Staricek, N., Young, L. E., & Cupp, P. (2020, in press). Revisiting the best practices in risk and crisis communication: A multi-case analysis. In H. D. O'Hair, & M. J. O'Hair (Eds.), *The handbook of applied communication research: Volume 1* (pp. 378–396). John Wiley & Sons, Inc.
- Vickery, K. (2016, February 6). Fears of northern exposure. Northern Territory News (Australia). Archived at https://web.archive.org/web/20200826162607/https://www.territorystories.nt.gov.au/bitstream/10070/261300/33/Northern%20Territory%20News_20160206_page22_NTNews_News_22.PDF
- Washington: CDC warns pregnant women to avoid 14 countries in the Americas. (2016, January 18). U. S. Official News: Plus Media Solutions. www.lexisnexis.com
- Weick, K. (1993). The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, 38, 628–652.
- World Health Organization. (2015a, October 21). Zika virus infection—Brazil and Colombia Disease Outbreak News: Emergencies preparedness, response. Archived at <https://web.archive.org/web/20151124091632/https://www.who.int/csr/don/21-october-2015-zika/en/>
- World Health Organization. (2015b, November 27). Zika virus infection—El Salvador. Disease Outbreak News: Emergencies preparedness, response. Archived at <https://web.archive.org/web/20151202032729/https://www.who.int/csr/don/27-november-2015-zika-el-salvador/en/>
- World Health Organization. (2015c, December 3). Zika virus infection—Venezuela. Disease Outbreak News: Emergencies preparedness, response. Archived at <https://web.archive.org/web/20151208125801/https://www.who.int/csr/don/03-december-2015-zika-venezuela/en/>

- World Health Organization. (2015d, December 21). Zika virus infection—Honduras. Disease Outbreak News: Emergencies preparedness, response. Archived at <https://web.archive.org/web/20151227033046/https://www.who.int/csr/don/21-december-2015-zika-honduras/en/>
- World Health Organization. (2016a, February 8). Zika virus infection—Maldives. Disease Outbreak News: Emergencies preparedness, response. Archived at <https://web.archive.org/web/20160215174708/https://www.who.int/csr/don/8-february-2016-zika-maldives/en/>
- World Health Organization. (2016b, February 12). Microcephaly—United States of America. Disease Outbreak News: Emergencies preparedness, response. Archived at <https://web.archive.org/web/20160215183548/https://www.who.int/csr/don/12-february-2016-microcephaly-usa/en/>
- Yen, V. Y-C., & Salmon, C. T. (2017). Further explication of mega-crisis concept and feasible responses. *SHS Web of Conferences* (33) 00034. <https://doi.org/10.1051/shsconf/20173300034>



Stakeholder-Formed Organizations and Crisis Communication: Analyzing Discourse of Renewal with a Non-Offending Organization

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ABSTRACT

Scholars have examined the ways organizations practice post-crisis communication strategies, including deny, diminish, and rebuild. The current study explores the extent to which a stakeholder-formed organization utilizes post-crisis discourse of renewal to rebuild, recover, and renew the Catholic Church after allegations of sexual abuse of minors publicly surfaced in the United States. Open-ended semi-structured interviews with founders and executive committee members of Leadership Roundtable revealed stakeholders practiced discourse of renewal to help the Catholic Church, an offending organization, recover from a crisis. This study also assessed the extent to which God and religion motivated stakeholders' responses. Results suggest religion is a critical motivating factor in stakeholders' responses to a crisis.

No organization is exempt from experiencing a crisis. Accidental, intentional, and victim crises occur regardless of the organization's purpose, size, or preparedness (Coombs, 2007). Religious organizations and institutions are no exception (Barth, 2010). The Catholic Church has experienced a number of crises from sexual abuse (Barth, 2010), abuse of power (Keenan, 2012) to mismanagement of funds (Kirchgaessner, 2015). One crisis in particular, the revelation of sexual abuse of minors at the hands of the Church's clergy, has received exceptional attention from

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journalists and scholars alike (Barth, 2010; Boys, 2009; Dokecki, 2004; Donnelly & Inglis, 2010; Maier, 2005). Despite the decades in which this crisis has unfolded and continually occurred, research on crises within religious organizations is limited.

The Crisis Communication Problem

There are three crisis communication problems regarding research on the Catholic sexual abuse crisis and crisis communication within religious organizations overall. First, crisis communication scholars have mainly focused on the Catholic Church's response to the crisis, as opposed to stakeholders' responses (e.g., parishioners) (Barth, 2010; Maier, 2005). Several scholars have taken steps to shift the focus of public relations practice and theorizing from organizations to stakeholders (cf. Yang & Taylor, 2014), but this has not yet reached research on religious crises or religious institutions and organizations (Boys, 2009). Second, crisis communication scholars have not considered the extent to which religion or belief in a deity, like God, can impact the crisis response and post-crisis reputation (Spaulding, 2018; Tilson & Venkateswaran, 2006). Ignoring or minimizing the influence of God or religion from research on religious organizations results in an incomplete understanding of the phenomenon at hand. Lastly, there is a primary limitation that unnecessarily restricts the ways in which discourse of renewal, the post-crisis communication framework utilized in the current study, can be studied or applied during a crisis.

Many scholars study discourse of renewal as a post-crisis communication activity that only the offending organization can utilize when communicating with their stakeholders (Seeger & Ulmer, 2002; Ulmer & Sellnow, 2002; Xu, 2018). Such approach to studying discourse of renewal excludes stakeholders and stakeholder-formed organizations. In this context, stakeholder-formed organizations are non-profit organizations, activist groups, or other groups that are created by stakeholders of the offending organization as a response to a crisis (Agné et al., 2015; Boys, 2009). Excluding stakeholders and their post-crisis communication efforts constrains the field's understanding of *who* can

practice public relations, *how* non-offending organizations or groups can practice public relations, and *what* public relations is. Furthermore, a crisis is defined as a negative event that “threatens important expectancies of stakeholders and can impact an organization’s performance” (Coombs, 2009, p. 99). Thus, understanding stakeholders’ threatened expectations, stakeholders’ responses to the negative event, and stakeholders’ responses to threatened beliefs is pertinent in order to understand the magnitude of the crisis and harm caused to the organization’s reputation *and* stakeholders themselves. Thus, the broad purpose of this research is to explore if, how, and why stakeholders can adopt a post-crisis discourse of renewal following the sexual abuse crisis from the Catholic Church.

Purpose of Research

The purpose of this research is to further public relations and crisis communication theory development in three ways. First, this study will analyze stakeholders’ perspectives of the crisis, and assesses the actions specific stakeholders took following a global revelation about the crisis. The specific stakeholders are founders and past and present executive board members of Leadership Roundtable, a non-profit organization. The current study categorizes Leadership Roundtable as a stakeholder-formed organization because the organization was formed after the *Boston Globe* article was published and leadership within the organization strategically consists of stakeholders to the Catholic Church (e.g., parishioners, donors, volunteers). Second, this study considers the extent to which an abstract entity (e.g., God) or unifying issue (e.g., religion) can influence stakeholders’ response to and perception of the crisis. Third, this study will also expand on how discourse of renewal is applied and studied. Traditionally, discourse of renewal is examined by analyzing the offending organization’s adoption of rhetoric that focuses on ownership of the crisis, a commitment to rebuild, and the crisis as an opportunity for renewal (Seeger & Ulmer, 2002). This research will view the potential for stakeholders to utilize discourse of renewal.

Crisis: Abuse of Minors within the Catholic Church

The abuse of young men and women at the hands of Catholic leaders is a global problem. The issue first came to light in the media in the 1980s, despite the abuse itself taking place as early as the 1950s (Catholic Church Child Sexual Abuse Scandal, 2019). Through the years, news media reported on isolated occurrences throughout Central and South America, Europe, and Australia. However, media coverage of the crisis escalated to a global platform in 2002 when the *Boston Globe* newspaper published an article detailing years of widespread abuse, lack of punishment, and lack of accountability within the Catholic Church (Robinson, 2002). As a result, the Catholic Church began responding to claims and acting by creating Church-commissioned reports and committees (Catholic Church Child Sexual Abuse Scandal, 2019).

The outrage that followed the *Boston Globe*'s revelations focused on the abuse itself, on the lack of punishment of pedophilic Catholic leaders on behalf of the Church, and on communication following the revelations (Barth, 2010). For instance, the Church was criticized for turning inward and relying on bureaucracy when they should have paired a reliance on bureaucracy with "personal involvement," empathy, and rational personal judgment (Barth, 2010, p. 785). This reliance on bureaucracy meant that pedophilic Catholic leaders were allowed to lead parishioners again after receiving "treatment" for pedophilia, something scientists now know is not "curable" (Barth, 2010, p. 785). Despite the creation of charters, Church-commissioned reports, and the introduction of multiple new Church-led programs and practices, scholars and the public agree that the Church has consistently mishandled and botched the post-crisis communication (Barth, 2010).

Contrary to the approach other crisis communication research has taken, this study does not focus on the offending organization's crisis response. Instead, this study examines stakeholders' perspectives and responses to the crisis. A stakeholder-centered approach is critical to theory development because public relations does not only function to benefit organizations.

Discourse of Renewal

Discourse of renewal is a post-crisis communication framework in which offending organizations engage in a “discourse of renewal . . . [which] focuses on the future, how previous limitations can be overcome and what new opportunities can be explored” (Seeger & Ulmer, 2002, p. 137). In other words, the post-crisis dialogue centers on renewal, change, reassurance, and optimism regarding the future (Fuller et al., 2019). Research suggests that the focus on “renewal” and the future is driven by the personal values and ethics of the organization’s leaders (Fuller et al., 2019; Seeger & Ulmer, 2002). Discourse of renewal serves as a direct contrast to apologia, a defense-based approach where organizations either deny the crisis, claim they are not responsible for the crisis, attempt to reduce the severity of the crisis, offer compensation, offer corrective action, or display mortification (Manzie, 2018; Seeger & Ulmer, 2002). To practice post-crisis discourse of renewal, organizations “connect with [their] core values ‘to reconnect the past to the present, to rediscover the old in the new’” (Hurst, 1995, p. 3; Seeger & Ulmer, 2002, p. 127). This involves reiterating a commitment to stakeholders, to rebuild, and to organizational renewal (Thompson et al., 2017).

Themes and Strategies within Discourse of Renewal

The first theme discourse of renewal research centers on is a commitment to stakeholders. Scholars explain that the commitment to stakeholders focuses on a commitment to transparency with stakeholders, of financially or physically caring for stakeholders, developing relationships with them, and their general well-being (Seeger & Ulmer, 2002). In practice, a commitment to stakeholders can look different depending on the crisis and organization. For instance, Ulmer and Sellnow (2002) detailed that after the 9/11 terrorist attacks on the World Trade Center, New York City police officers and firefighters communicated a commitment to stakeholders by continually reminding stakeholders that they will give their lives to save others. On the other hand, Seeger and Ulmer (2002) explained that two other organizations at the center of a different crisis communicated a commitment to stakeholders

by promising to pay employee salaries while the organization embarked on a 2-year construction process.

The second theme highlighted in discourse of renewal research is a commitment to rebuild. A commitment to rebuild is typically associated with rebuilding a physical structure. For example, the offending organization communicated a commitment to rebuilding facilities that burned down in Seeger and Ulmer's (2002) study. To build upon Seeger and Ulmer's conceptualization of discourse of renewal, the current study posits that a commitment to rebuild can be communicated for non-physical structures like programs, laws, safety features, and trust. For instance, an organization can communicate a commitment to rebuilding trust in an organization, rebuilding lives that were destroyed by sexual abuse, or rebuilding policies that failed to protect vulnerable stakeholders.

The last theme researchers associate with discourse of renewal is a commitment to renewal. A commitment to renewal emphasizes dedication and devotion in renewing the organization's productivity, design, programs, purpose, and values. For instance, in Seeger and Ulmer's (2002) research, the offending organization communicated a commitment to renewal by focusing on an improved facility design and by emphasizing the placement of stakeholders and their immediate community at the core of their organization. This was mirrored in Ulmer and Sellnow's (2002) results, which suggest that American political leaders and businesses communicated a commitment to renewal by reinforcing core values such as "patriotism and independence . . . and determination" after the 9/11 terrorist attacks (p. 364).

In addition to the three themes, scholars posit that organizations employ five communication strategies when utilizing discourse of renewal (Ulmer, Seeger, & Sellnow, 2007; Xu, 2018). First, post-crisis communication must consist of a natural and immediate response, as opposed to a calculated response aimed at shifting blame or protecting the organization from further reputational damage (Ulmer, Seeger, & Sellnow, 2007). The second strategy includes prospective communication, and the third strategy focuses on optimistic communication regarding future opportunities as a result of the crisis (Ulmer, Seeger, & Sellnow, 2007). The final two strategies within this framework include (4) ethical

communication (5) from a leader within the organization (Seeger & Griffin Padgett, 2010; Xu, 2018).

Limitations in the Current Conceptualization

There are important limitations in the current application and study of discourse of renewal. Namely, scholars have excluded the ways stakeholders can practice discourse of renewal and instead focus on the application of this post-crisis communication strategy from the offending organization. Second, there is limited research on what can be rebuilt for the second theme in discourse of renewal. Researchers have focused on rebuilding physical structures (Seeger & Ulmer, 2002), however the current study posits that this theme can be applied to non-physical structures, like an organization's image (Thompson et al., 2017), stakeholder confidence in the organization (Ulmer & Sellnow, 2002), trust, policies, training programs, and more. Lastly, scholars have restricted the utilization of one strategy in post-crisis discourse of renewal. The last strategy focuses on communication from a leader within the offending organization (Xu, 2018). The current study posits that the communication can come from a leader *outside* of the offending organization, including a victim of the crisis, a leader of a stakeholder-formed organization, or a leader within a related industry. The current study aims to build upon previous research and further scholarship on discourse of renewal by addressing each of these limitations.

Leadership Roundtable

Before discussing previous research on the Catholic sexual abuse crisis specifically, it is imperative to identify and describe the stakeholder-formed organization that is central to this study. Leadership Roundtable is a 501(c)(3) non-profit organization that educates and promotes "best practices and accountability in the management, finances, communication, and human resource development of the Catholic Church" (leadershiproundtable.org, n.d.). The organization was officially formed in 2005 after a 3-day gathering in 2004 that joined industry leaders working in for-profit and non-profit organizations within the U.S. More on

the inspiration behind the gathering and creation of Leadership Roundtable is presented in the results section.

To clarify, Leadership Roundtable is a separate and independent organization from the Catholic Church. While a small portion of current executive members are religious leaders within the Catholic Church, there are a number of distinguishing features unique to Leadership Roundtable's bylaws and governance that preserves its independence from the Catholic Church.¹ Furthermore, according to interviews with the founder of Leadership Roundtable, the Catholic Church was originally not receptive to Leadership Roundtable's services or resources in the early years of Leadership Roundtable's existence.

Currently, Leadership Roundtable consists of leaders in business, finance, academia, philanthropy, and non-profit organizations. Leaders within Leadership Roundtable (e.g., executive committee members) are devout and life-long Catholics who have volunteered or served in their respective parishes. At its core, Leadership Roundtable offers consultancy services to archdioceses, dioceses, parishes, and other Catholic communities and organizations within the U.S. regarding best practices in human resources, finances and other managerial operations. Therefore, individuals

1. According to Kerry Alys Robinson, a participant in this study, "the Catholic Church, in the U.S. alone, is comprised of 197 dioceses, 17,000 parishes, and countless schools, hospitals, and charities and each of these has a separate governance structure. Having said that, many Catholic nonprofits have a bishop on their board or have sought to be recognized as an official Catholic entity in order to be listed in the Official Catholic Directory which can help them to receive grant funding from Catholic foundations, for example. Leadership Roundtable was set up intentionally as an independent entity, with no bishop on its board, with no governance structure that would require it to seek permission or approval from the bishops in the U.S. or in Rome and with no listing in the Official Catholic Directory. [Leadership Roundtable is] independent entirely from the United States Conference of Catholic Bishops which is why we are able to present ourselves as an independent, nimble, effective partner to the bishops. One of the ways we have earned [the Church's] trust and confidence even while being outside of their control is by not wading into doctrinal matters but focusing solely on what we do best: problem solve, introduce best practices, strengthen management, finance, communications and human resources, to allow for the Church's mission to flourish unencumbered. Having a nun or a priest or even a layperson on our board who happens to work for another Catholic organization in no way detracts from our independence. And yet it strengthens our mission. It should also be noted that board members are not paid for their service on our board."

who utilize Leadership Roundtable's services and resources are formally tied to the Catholic Church or other Catholic organizations.

The current study focuses on Leadership Roundtable specifically because of their unique organizational purpose. Other stakeholder-formed organizations like Don't Be Afraid Foundation, Healing Voices, Voice of the Faithful, and Survivors Network of those Abused by Priests primarily aim to help survivors of sexual abuse. Leadership Roundtable strategically does not provide any resources, training, or aid for survivors of sexual abuse. Instead, Leadership Roundtable's goal is to assist the Catholic Church and Catholic organizations in implementing best practices in human resources, accounting, management, and other business-related functions. Founders posit that the crisis occurred as a result of immoral and unethical behavior, and a breakdown in industry best practices. Leadership Roundtable presents a unique case, one that deserves further scrutiny, to which can inform public relations theory and our collective understanding post-crisis communication and crises within religious organizations.

Post-Crisis Communication and the Catholic Sexual Abuse Crisis

Public relations scholars who study religious organizations, and specifically crises within the Catholic Church, have approached the area in many ways. However, scholars have reached a similar conclusion, namely that the Catholic Church mismanaged the post-crisis communication, which resulted in additional unnecessary pain and suffering. For instance, Maier (2005) discussed their personal experience working for the Catholic Church and applied theory of publics to their research in order to organize a list of conclusions regarding the Church's response (cf. p. 223). Ultimately, Maier (2005) argued for the importance of engaging in dialogue with publics before, during, and after a crisis, and concluded that an organization can recover from a crisis by establishing relationships characterized by openness, attentiveness, and responsiveness. These conclusions regarding relationship development in post-crisis plans are pertinent to our collective understanding

of crisis recovery. Barth (2010) proposed similar steps as Maier (2005), like building community and relationships, in their conceptual paper. However, Barth (2010) focused on the Church's response and examined the sexual abuse crisis through the lens of crisis management theory. Barth (2010) outlined several reasons as to why the Church failed in their crisis communication efforts and noted that the Church "lost sight of their primary mission: the spiritual care and general welfare of the members of the Church" (p. 784). Importantly, Barth acknowledged the impact of religion and God in the crisis and crisis response strategy, which is an important step toward a holistic approach.

On the other hand, Boys (2009) examined post-crisis communication from the Church and from specific stakeholders. To do this, Boys (2009) analyzed messages from the Church and two stakeholder-formed organizations: Voices of the Faithful and Survivors Network of those Abused by Priests. Results from their examination suggest that each organization "employed different types of crisis communication in hopes of meeting different crisis outcomes" (p. 305). For instance, Boys (2009) described the ways in which the Survivors Network organization critically approached crisis communication with the ultimate goal of ending sexual abuse by Catholic clergy, whereas the Voices of the Faithful organization utilized a "responsive orientation to seek legitimacy and influence" (p. 305).

While public relations research on the Catholic Church sexual abuse crisis is increasing, current research has notable limitations. For instance, Maier (2005) did not consider the unique context in which relationships occur between stakeholders and a religious institution, nor the religion that binds these parties together. Overlooking the influence of religion and God in a religious crisis constrains our understanding of crisis recovery. For example, does the stakeholder's relationship with God remain stable, improve, or suffer when the Catholic Church's reputation is damaged by a crisis? On the other hand, Barth (2010) only examined the Church's post-crisis communication while overlooking stakeholder's perspectives of and responses to the crisis. This approach limits our understanding of the threatened expectancies of stakeholders (Coombs, 2009). Lastly, Boys (2009) analyzed press releases from

stakeholder-formed organizations as opposed to interviewing or surveying the stakeholders. While Boys's approach is important and necessary, it also means that to date, there is little research conducted analyzing stakeholders' personal accounts of the crisis and aftermath.

The current study will address these limitations in order to further our understanding of stakeholders' responses to religious crises, discourse of renewal, and the impact of God and religion. Understanding and exploring stakeholder perspectives, approaches, reasons, and beliefs regarding the crisis communication, crisis management, and unifying entity is pertinent in order to take a holistic approach to crisis communication and public relations theorizing on religious organizations. To do this, the author entered the field with two broad questions in mind; however, a third question quickly emerged during data collection:

RQ1: What post-crisis communication strategy did Leadership Roundtable utilize, and what drove that approach?

RQ2: To what extent can a stakeholder-formed organization practice discourse of renewal for the offending organization?

RQ3: To what extent does an abstract entity, like God, or unifying issue, like religion, impact the selection of a post-crisis communication strategy?

Method

To explore if, how, and why religious stakeholders employ discourse of renewal, as well as the role of religion and God in a post-crisis communication approach, the author interviewed 11 past and current leaders and members within Leadership Roundtable. Participants include current and past chief executive officers of Leadership Roundtable, the original organizer of the 2004 three-day gathering, multiple past and present executive committee members, the founding executive director, the current global ambassador of Leadership Roundtable, as well as participants who utilize Leadership Roundtable's resources. Each participant is a devout Catholic with multiple decades of belief and

experience with the religion. As a result, each participant has a unique history with the Catholic Church. For example, Kerry Alys Robinson (founding executive director and current global ambassador of Leadership Roundtable) held the position of Director of Development at Saint Thomas More Catholic Chapel & Center at Yale University from 1997 to 2006, while other participants like James Dubik, PhD, retired Lieutenant General in the U.S. Army (executive board member), is a parishioner who has not participated in any formal paid work for or with the Catholic Church.²

While the number of participants may appear small, this approach mirrors previous research on discourse of renewal (Seeger & Ulmer, 2002; Thompson et al., 2017; Wastell et al., 2007) and was necessary given the study's purpose and the type of insider historical information that is needed in order to answer the questions posed (Merriam, 2009). For example, Seeger and Ulmer (2002) interviewed two CEO's along with an undisclosed number of "staff and . . . members of the community" (p. 131). Interviews were conducted in person during the *Engaging, Equipping, and Energizing Catholic Leaders for the Joy of the Gospel* conference and over the phone. Data collection lasted from June 2017 to November 2017. Interviews lasted on average 41 minutes, with the longest lasting 56 minutes and the shortest lasting 28 minutes. Each interview was audio recorded and after transcribing the interviews, the transcripts exceeded 110 pages.

To analyze the data, the researcher utilized the Straussian grounded theory approach to qualitative data analysis (Howard-Payne, 2016). The Straussian approach includes systematic procedures like open, axial, and selective coding (Strauss & Corbin, 1998). Importantly, within the Straussian grounded theory approach, researchers browse existing research before entering the field, and enter the field with a question in mind (Howard-Payne, 2016; Strauss & Corbin, 1998). Therefore, the researcher entered the field with general knowledge of various crisis communication strategies and the general question of, "What post-crisis

2. Dubik's volunteer service to the Catholic Church includes serving as an altar server in grade and high school, lector in college and as an adult, a guitarist in choirs, and taught children the Confraternity of Christian Doctrine for 2 years.

communication strategy did Leadership Roundtable utilize, and what drove that approach?”

Because of the researcher’s general knowledge of various crisis communication strategies, it became apparent during data collection that Leadership Roundtable utilized discourse of renewal. Therefore, after identifying the post-crisis communication strategy Leadership Roundtable utilized and factors that drove their approach during data collection, it became important to also answer the question of, “To what extent can a stakeholder-formed organization practice discourse of renewal for the offending organization?” Additionally, to examine the ways in which religion and God impacts stakeholders’ post-crisis actions, the final question emerged as “To what extent does an abstract entity, like God, or unifying issue, like religion, impact the selection of a post-crisis communication strategy?” The results section will address each of the three broad questions posed.

To answer the last two questions, which focus on stakeholder-formed organizations practicing discourse of renewal and the influence of God and religion, the researcher continued to utilize the Straussian grounded theory approach to data analysis by employing open, axial, and selective coding. During this process, over 50 open codes were categorized into axial codes, which were then organized into selective codes that informed the results of this research (see Table 1). Importantly, theory was incorporated into the data analysis process, which is atypical in Glaser’s grounded theory approach to data analysis (Glaser & Strauss, 1967), but acceptable according to the Straussian grounded theory approach to data analysis (Howard-Payne, 2016).

TABLE 1 Open Codes

Connections by relationships	LR testimonials
Connections by enlightenment*	LR future goals
Connections by proximity	LR goals achieved*
Connections work—local	“New focus”*
Connections work—national	“What could we bring to the Church?”

Connections personal	Interactive media
Connections church—local	Interactive conversations
Connections—informal advising	Church involving laity
Forming relationships in community	Church excluding laity
Forming relationships across U.S.	Church response to LR—positive
Forming international relationships	Church response to LR—negative
Inspiration—religious—God/Holy Spirit	Emotions—before crisis (BG article)
Inspiration—religious—personal	Emotions—after crisis (BG article)
Inspiration—religious—Bible*	Church critique
Inspiration—religious—network	Questioning activism*
Inspiration—industry	Personality description—non-religious
Inspiration—feminist*	Personal history
Internal processes—non-profit orgs	Response to crisis—personal
Internal processes—for-profit orgs	Interpretation of Church response
Internal processes—army*	Actions—before crisis (BG article)
Professional history—story	Actions—after crisis (BG article)
Professional history—background	Religious history—story
Management experience	Religious history—background
Active industry leader	Response to crisis—religious
Laity in positions of authority	“Responding when asked”—God/Holy Spirit
Laity leadership	Personality description—religious*
“Responding when asked”—professional	“Humans are flawed”/“Humans make errors”
Response to crisis—professional	Bible—quote, verse, story*
LR services	Feminism*
LR success	“Women in Church”—personal stories*
LR history	Internal processes—Catholic church
LR origin	
<p><i>Note.</i> An asterisk (*) indicates that 1–2 participants aligned with this code. Codes without an asterisk indicate a majority of participants aligned with the code.</p>	

Results

Leadership Roundtable employed, and continues to employ, post-crisis discourse of renewal for crises regarding the Catholic Church. Through interviews with founders and executive committee members, it became evident early on during the data collection and analysis process that Leadership Roundtable practiced discourse of renewal. Leadership Roundtable did this by communicating a commitment to three different stakeholder groups, a commitment to rebuilding trust and ethical operations within Catholic dioceses and parishes, a commitment to renewal regarding the Catholic Church's values, purpose, and ethics, and by utilizing all discourse of renewal strategies (Ulmer, Seeger, & Sellnow, 2007; Xu, 2018).

Commitment to Stakeholders

Like many organizations included in studies on discourse of renewal, Leadership Roundtable has various stakeholders they need to communicate with after a crisis occurred (Seeger & Ulmer, 2002; Ulmer, Seeger, & Sellnow, 2007; Ulmer & Sellnow, 2002). However, unlike other organizations, Leadership Roundtable was not the offending organization. Indeed, Leadership Roundtable was formulated after the crisis occurred, yet Leadership Roundtable communicated a commitment to the following stakeholder groups: the Catholic Church (the international institution), Catholic leaders in the U.S., and believers of the Catholic faith.

Commitment to the Catholic Church (Institution)

The interview data reveal that while participants are personally stakeholders to the Catholic Church (e.g., laity), Leadership Roundtable as an organization utilized discourse of renewal to communicate a commitment to the Catholic Church as a stakeholder of the Leadership Roundtable organization. Meaning, Leadership Roundtable aimed to help the Catholic Church as an institution recover from the crisis with strategic objectives, goals, and tactics. This commitment was communicated in multiple ways, but is most apparent in the first few years of Leadership

Roundtable and in the current purpose and function of the organization.

During the first few years of Leadership Roundtable's existence, participants in the organization aimed to strategically support the Catholic Church through members' expertise in business and communication practices. Leadership Roundtable's Founding Executive Director and current global ambassador, Kerry Alys Robinson, described the purpose succinctly:

[Leadership Roundtable] came into existence because in examining how we could be part of the solution, how we could help affect healing and reconciliation in our faith family, the Church, we wanted to bring underutilized expertise, skills, perspective, and a way of serving the Church. We wanted to remind the Church that there's managerial excellence, experience, financial acumen, and cogent analysis that Catholic laity are willing to provide Church leaders for free to strengthen the Church.

In other words, Leadership Roundtable utilized an under-utilized resource: the professional experience and expertise of believers of the Catholic faith. Research participants, including Robinson and Geoff Boisi, Founding Chair of Leadership Roundtable and current Chairman and Chief Executive Officer of Roundtable Investments, explained that Leadership Roundtable was not created to directly help with the sexual abuse crisis. Data reveal that leaders expressed discomfort in providing advice and guidance on an issue that they were not trained in or experts in, like sexual abuse. Instead, Leadership Roundtable was created to assist in alleviating problems that *led* to the sexual abuse crisis, like poor hiring practices, unethical leadership, lack of transparency, and communication. Their hope was that excellent training from current industry professionals would decrease the potential and possibility of a similar crisis from occurring. For example, with better training and improved policies, pedophilic individuals would be removed from positions of authority and distanced from vulnerable stakeholders, as opposed to maintaining their position of power and shuffled from parish to parish.

To communicate a commitment to the Catholic Church, founding members sought advice and guidance from devout Catholics who are leaders within their various industries. According to

Boisi, the very first meeting of Leadership Roundtable consisted of 70 “lay folks . . . who had expertise in the different functional areas including governance, management, human resource . . . financial resource development and accountability . . . and communications.” During these initial meetings, attendees created a list of recommendations they or others wanted to provide to the Church. The list of recommendations focused on the ways in which industry leaders can assist or support the Church in alleviating current problems, preventing future ones, and training Church leaders to identify and resolve issues independently. Also included in the list of recommendations were methods and strategies to improve crisis communication. In the years that followed, as a result of increased trust between the Church and Leadership Roundtable, Leadership Roundtable went beyond communicating a commitment and ultimately worked with the Catholic Church to implement these recommendations and train Catholic leaders.

Commitment to Catholic Leaders within Dioceses, Parishes, and Other Organizations

To communicate their commitment to Catholic leaders within dioceses, parishes, and other Catholic organizations, Leadership Roundtable implemented a three-step plan. First, the stakeholder-formed organization sought to understand the specific problems individual dioceses, parishes, and Catholic organizations faced in the U.S. Then, they identified any regional or national trends. Lastly, Leadership Roundtable created training programs, educational materials, and sample policies and gave these resources to Catholic leaders. The goal is for Catholic leaders to adopt and then implement these new programs, materials, and policies within their parishes and organizations.

Following many nationwide surveys and discussions with Catholic leaders and laity, Leadership Roundtable created programs, policies, and educational materials to help Catholic leaders govern, lead, and manage their parishes, dioceses, and organizations. For instance, Leadership Roundtable created a Catholic Standards for Excellence program, which is comprised of 55 “best church management practices” (leadershiproundtable.org, n.d.). To educate Catholic leaders on the program, Leadership

Roundtable offers consultant training so that Catholic leaders can fully immerse themselves in the 55 recommended practices, and then assist in implementing the practices throughout their organizations and parishes.

Importantly, in addition to offering training on best practices in management, human resources, communication, finances, and more, Leadership Roundtable also partnered with other Catholic-based organizations (e.g., dioceses and seminaries) to compile a “Toolbox for Pastoral Management” for Catholic leaders. Within the toolbox, senior-level pastors and lay leaders provide advice and guidance on the business side of Church management (e.g., fundraising, leadership development, communication, human resources, finances) and also on the religious side of Church management (e.g., pastoral planning, volunteer management).

Commitment to Believers of the Catholic Faith

One of the fundamental stakeholder groups Leadership Roundtable communicated a commitment to are believers of the Catholic faith. Leaders of the organization explained that helping the Church recover and renew their programs, purpose, and values is simultaneously helping Catholic believers and laity. For instance, when the Church experiences mistrust or a damaging reputation as a result of a crisis, believers of the Catholic faith also suffer the consequences of the Church’s crisis. To communicate their commitment to believers of the faith, the leaders within Leadership Roundtable considered lay people’s perspectives, opinions, hurts, and struggles with the Church and Church leaders, and sought their feedback on new recommendations, programs, and responsibilities. Furthermore, the primary goal of Leadership Roundtable is to encourage the involvement of laity (i.e., non-ordained Catholic believers) within diocesan, parish, and organizational operations.

Commitment to Rebuild

Interview data reveal Leadership Roundtable communicated a commitment to rebuilding trust, ethical operations, and improved operations within the Catholic Church. While no

physical structures or facilities needed to be reconstructed (Seeger & Ulmer, 2002), the broken trust, damaged reputation, poor management, and outdated policies needed to be rebuilt, reestablished, and taught to all levels of leaders in all Catholic organizations, including parishes and schools. Dubik describes the commitment to rebuild succinctly:

What we asked ourselves was, “How can we help the Church move from where it is, to where it ought to be?” That’s how we developed [Leadership Roundtable’s] mission, our vision, our guiding principles, and our strategy, knowing that we don’t run the Church. We had a transformational mission for trying to transform an organization for which we were not responsible. When we described our mission that way, that helped inform us on how we had to proceed and what strategy we should develop.

Rebuilding trust and outdated policies were top priorities and the primary focus in the first several years of Leadership Roundtable, which was a particularly difficult task since the Church was not keen on accepting help from Leadership Roundtable in the first few years. Founding members acknowledged that rebuilding trust in the Church would be a decades-long effort. However, rebuilding and updating outdated policies was a practical solution that could be addressed, corrected, disseminated, and employed at a quicker pace. To rebuild outdated policies, Leadership Roundtable developed the Catholic Standards for Excellence. The Catholic Standards of Excellence allowed the organization to update policies that had failed and create new policies to secure safety, transparency, and ethical interactions, management, and leadership. Additionally, the organization rebuilt operations within the Church by offering consulting, road mapping tools, assessment tools, a “toolbox” of programs and procedures, and development programs for the next generation of Catholic leaders (leadershiproundtable.org, [n.d.](#)).

Commitment to Renewal

Interview data reveal Leadership Roundtable communicated a deeply-rooted commitment to renewal in Catholic faith, values, purpose, and ethics in business and communication. There are two key areas of renewal that Leadership Roundtable sought to

restore. First, the sexual abuse crisis signaled distance from the Catholic faith and values. The Catholic Church is against sexual abuse, abuse of power, manipulation of minors, and pedophilia. However, the Church does believe in a system of repentance, forgiveness, and rehabilitation. Therefore, Leadership Roundtable specifically did *not* advise or provide programs regarding doctrinal issues, liturgy, or specifics on sexual abuse, because according to participants, these topics were not within their area of expertise. Instead, the founders combined their industry expertise and ethics with Catholic values to create a custom approach to renew management, communication, and operations within the Church, parishes, dioceses, and other Catholic organizations. Dubik expressed their contributions concisely:

We were here to help reform temporal management and leadership affairs. We were not going to comment on any matters of faith, any matters of doctrine, any matters of dogma. That's not our role. Our role is to help [the Church] think through how to be better stewards of the resources, people, facilities, and money that the ecclesiastic leaders have at their disposal.

Therefore, while the sexual abuse crisis signaled distance from Catholic faith and values, Leadership Roundtable utilized their industry expertise and experience to revitalize and renew the commitment to and communication of Catholic faith and values, while not advising on Catholic doctrine, religious practices, sexual abuse, or the like.

Leadership Roundtable communicated a commitment to renewing Catholic values by creating policies, programs, and training resources that expertly tie Catholic values with industry values. For instance, the Catholic Leadership 360 program combines Biblical leadership with industry leadership best practices. The result is a 3-to-4-month training program that educates priests and lay ministers on “leadership development, performance improvement, and interpersonal communication” (leadershiproundtable.org, [n.d.](#)). Within this program, Catholic leaders are trained on Biblical leadership values, like integrity, humility, and servant leadership as well as industry leadership values, like resilience, adaptability, and accountability.

The second area of renewal focused on the Church's poor management of the crisis and communication. The Church's poor handling of the crisis and poor communication after the crisis went public signaled distance from ethical and transparent communication. For instance, instead of firing pedophilic leaders immediately upon news of their crimes, the Church demoted them, shuffled them around to different parishes or dioceses, or at worse, promoted them (Catholic Church Child Sexual Abuse Scandal, 2019; Green, 2019). To communicate this second commitment to renewal, participants focused on restoring, revitalizing, and supporting the renewal of ethical and transparent practices and communication within the Church and Catholic organizations. An example of this is Leadership Roundtable's online and in-person training on crisis communication. The training includes recommendations and instructions, like designate a response team, "treat key constituents as partners, not audiences," and "keep your logic transparent" (Curley, n.d.).

The Unique Context: Religion and God

The final research question asks "To what extent does an abstract entity, like God, or unifying issue, like religion, impact the selection of a post-crisis communication strategy?" Data reveal that God and belief in the Catholic faith played a critical role for the majority of participants in two key ways. First, belief in God and the Catholic faith heavily influenced participants' decisions to act after the *Boston Globe* article was published. Second, participants' faith and relationship with God influenced their decision to practice discourse of renewal, as opposed to criticizing or abandoning the Church, or denying that a crisis exists.

Interview data reveals that God and religion were key factors when participants were deciding how to help, why they wanted to help, and the desired outcome of their support. Specifically, participants' devotion to the Catholic religion and their belief in God's plan for the Catholic Church informed their decisions and actions. Participants described that they didn't want to see the Church "sink," "fail," or "die" as a result of this crisis. They were able to successfully separate the Church and the Church's God-ordained

mission from the actions of individuals within the Church. To prevent the Church from failing, participants described how they felt it was their duty to God and their religion to act in a way that would help the Catholic Church, Catholic leaders, and Catholic believers recover from the crisis.

According to participants, a crisis within the Catholic Church is unique because it impacts trust in the Church as an organization, and in the Catholic faith. This threat to the Catholic faith, one that participants deeply believe in, served as the primary motivator to act in a way that would not further damage the Church or the reputation of the religion. In other words, participants were worried that criticizing or abandoning the Church would be perceived as criticizing or abandoning the Catholic religion. Therefore, participants focused on “restoration” and “renewal” in order to reestablish faith in the Catholic religion and in the Church, in order to reassure Catholic believers, and in order to gain the trust of Catholic leaders so they could then train them.

While founding members still experienced emotional and spiritual agony as a result of the crisis, data reveals their devotion to their religion and trust in God substantially impacted their post-crisis response, more so than personal or professional desires, values, or ethics. Their belief and faith in the Catholic religion and Church inspired, encouraged, and emboldened their journey toward renewing an organization that deeply hurt them and others.

In conclusion, the results have answered each of the three research questions: (1) Leadership Roundtable practiced discourse of renewal; (2) this stakeholder-formed organization practiced discourse of renewal by communicating a commitment to stakeholders, rebuilding, and renewal; (3) and an abstract entity and unifying issue impacted participants’ decisions and actions more than any other factor. The next two sections will provide context for these results and discuss implications for public relations research.

Discussion

The purpose of this study is to fill gaps in research on crises within religious organizations and post-crisis discourse of renewal. To

do this, the current study focused on stakeholders' responses to the crisis, as opposed to the offending organizations' efforts or responses. The current study also explored the impact of God and religion on the selection of a crisis response strategy, and explored the ability for a non-offending stakeholder-formed organization to practice discourse of renewal. Scholars have suggested that stakeholder-formed organizations utilize different crisis communication strategies than the offending organization (Boys, 2009). However, the current study is the first known study to examine the ability for stakeholders to practice discourse of renewal.

Five Strategies for Discourse of Renewal

Interview data reveals Leadership Roundtable practiced and continues to practice the five strategies of discourse of renewal, including a natural and immediate response, forward-thinking discourse that focuses on the future, future possibilities and opportunities as a result of the crisis, communication from a leader, and ethical communication (Ulmer, Seeger, & Sellnow, 2007; Xu, 2018). Leadership Roundtable practiced the five strategies in a variety of ways, but only key examples for two strategies will be discussed: ethical communication and communication from a leader.

Leadership Roundtable practiced the "ethical communication strategy" by combining Catholic values with ethical communication guidelines from multiple industries. This serves as a stark contrast to previous research, which focused on *one* organization's values or ethical guidelines from *one* industry (Seeger & Ulmer, 2002; Ulmer, Seeger, & Sellnow, 2007). For instance, Leadership Roundtable combines ethical communication guidelines from Susan King's (current Co-Chair of Leadership Roundtable) career in journalism, with Dubik's career in the U.S. Army, and with Boisi's career in the financial sector. In simpler terms, Leadership Roundtable combined sources and guidelines of ethical communication across industries and then paired those guidelines with Catholic values in order to utilize post-crisis discourse of renewal.

Second, researchers posit that the ethical communication should come from the leader of the offending organization (Seeger & Ulmer, 2002; Xu, 2018). However, Leadership Roundtable is a stakeholder-formed organization; therefore, their approach

to this last strategy is unique compared to previous research on discourse of renewal. In sum, ethical communication came from leaders from Leadership Roundtable, who are industry leaders for-profit, non-profit, and government organizations. For instance, Boisi is a leader in the financial sector, Dubik is a retired three-star General, King was the Vice President at Carnegie Corporation, and Robinson was the director of development for Saint Thomas More Catholic Chapel and Center at Yale University. Therefore, the communication came from leaders in various industries who were united through their association with Leadership Roundtable and devotion to the Catholic faith. This distinction is critical to note because it supports the current study's findings that Leadership Roundtable practiced discourse of renewal through each of the five strategies crisis scholars have outlined.

Leadership Roundtable: A Stakeholder-Formed Organization

A stakeholder-formed organization practicing discourse of renewal is unique and new to this body of literature (Boys, 2009). This finding contributes to our understanding of the practice of public relations, namely that it is not a practice reserved solely for non-profit or for-profit organizations. Indeed, activist groups, individuals, and stakeholder-formed organizations practice public relations and crisis communication (Botan & Taylor, 2004; Boys, 2009). Additionally, this finding contributes to our understanding of the harm a crisis causes to both organizations and stakeholders. Much of the crisis communication literature details the damage a crisis inflicts on an organization's reputation, trust in the organization, and sales (Anderson & Guo, 2020; Fuller et al., 2019; Manzie, 2018; Ulmer & Sellnow, 2000). Understanding the harm to stakeholders is critical in order to understand the threatened expectancies of stakeholders and magnitude of the crisis.

More broadly, determining that stakeholders can practice discourse of renewal highlights the unique concept of a stakeholder-formed organization. Indeed, crises can result in the creation of other organizations. As outlined in the current study and in previous literature, stakeholder-formed organizations are created to help victims of the crisis, to inflict further damage on

the offending organization, to help the offending organization, and more (Boys, 2009). Investigating the impact of stakeholder-formed organizations on the crisis and on the offending organization's reputation can help scholars advance public relations theory. For instance, data in the current study reveal three distinct groups of stakeholders Leadership Roundtable communicated a commitment to, which is a unique finding for discourse of renewal research.

Limitations

While this study revealed the experiences of leaders within Leadership Roundtable during and after the Catholic sexual abuse crisis, there are a number of limitations. Primarily, this research focused solely on the experiences and perspectives of leaders within Leadership Roundtable, an organization that has existed for nearly two decades. While the experiences of Catholic leaders who utilize Leadership Roundtable's resource are included in the data analysis and present in the results section, the researcher was not able to elaborate on their individual stories or experiences due to the scope of the research.³ Additionally, while the sample size is relatively small for a single-method interview study, this mirrors previous research on discourse of renewal and the requirements for participation in this study were narrow, given the purpose of the research.

Regarding the sampling method for this study, several other stakeholder-formed organizations exist as a result of the sexual abuse crisis. The researcher did not consult or collect data with other organizations so as to narrow the focus of this research. Future studies should include multiple stakeholder-formed organizations to understand how non-offending stakeholder-formed organizations practice post-crisis communication. Lastly, Leadership Roundtable is a unique group of stakeholders; therefore, the applicability of the findings is limited.

3. Of the Catholic leaders interviewed for this project, all revealed that Leadership Roundtable's resources and training have helped them personally, their parishes, and/or their organizations.

Conclusion

The purpose of this research is to assess the potential for a non-offending stakeholder-formed organization to practice discourse of renewal and explore the extent to which God and religion can impact the decision to act and selection of a post-crisis communication strategy. Through interviews with past and present leaders of Leadership Roundtable, data reveal stakeholders practiced discourse of renewal, formed an organization to support the offending organization, and utilized their personal, professional, and religious values and ethics to practice discourse of renewal. Additionally, leaders' devotion to the Catholic faith and God influenced their post-crisis communication strategy selection.

This research is significant for two reasons. First, the current study expanded the framework for discourse of renewal. The current study determined that stakeholders can practice discourse of renewal, which contributes to the growing body of research on this post-crisis communication strategy. This study also expanded upon certain components within discourse of renewal. For instance, one theme that is consistent within the practice of discourse of renewal is a commitment to rebuild. The current study demonstrated that stakeholders and organizations can communicate a commitment to rebuild trust, policies, and programs, in addition to physical structures, which have been predominantly highlighted in previous research (Seeger & Ulmer, 2002; Ulmer & Sellnow, 2002).

Second, the current study considered if and how religion, faith, and God can influence the post-crisis strategy selection and the motivation for stakeholders to engage in post-crisis discourse. This study continues on the work of Tilson and Venkateswaran (2006) to consider the ways religion and belief in God can serve as a unifying factor, influence, or inspiration in crisis communication and relationship-formation.

Importantly, this study has several practical and theoretical implications. Regarding practical implications, the current study demonstrates the importance of relationships and trust between organizations and stakeholders before a crisis occurs. Meaning, without the previously established relationship and trust between

stakeholders and the Church, stakeholders might not have chosen a post-crisis communication strategy that emphasizes renewal and restoration. This practical implication spans beyond religious organizations and institutions. For instance, research suggests that soccer teams, video games, and political organizations encourage religious-like devotion to the team, politician, and game in similar ways that churches encourage devotion to the faith and God (Spaulding, 2016; Tilson & Venkateswaran, 2006; Xifra, 2008). Therefore, if a political organization faced a crisis, but also cultivated relationships with their stakeholders, had a history of trust between the organization and stakeholder, and cultivated the religious-like faith in the organization before the crisis occurred, then it is possible that the organization's stakeholders could respond in a similar way as founding members of Leadership Roundtable. The notion that pre-crisis devotion, relationships, and trust between an organization and stakeholders could help the organization recover after a crisis occurs is worth investigating in future research. Overall, more research on the post-crisis communication strategies of non-offending organizations, including stakeholder-formed communities and organizations, would be beneficial to the crisis communication scholarship.

Second, the current study has important theoretical implications. Mainly, the current study demonstrates the importance of considering the context in which organizations exist and the context in which crises occur. Ignoring the religious context and influence of faith and God limits our collective understanding of stakeholder motivations and values within discourse of renewal specifically, but also within crisis communication and public relations research overall.

In conclusion, this study provides insight into the motivations, processes, and history of a stakeholder-formed organization, formed in response to a crisis occurring within a separate institution. In capturing stakeholders' histories, perspectives, and experiences, this study provides insights into discourse of renewal and the influence of religion and God in the practice of public relations and crisis communication. Moving forward, future research should further investigate the influence of faith on the practice of

public relations, the context in which organizations exist and in which crises occur, as well as the ability for stakeholders to practice post-crisis communication.

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References

- Agné, H., Dellmuth, L. M., & Tallberg, J. (2015). Does stakeholder involvement foster democratic legitimacy in international organizations? An empirical assessment of a normative theory. *The Review of International Organizations*, 10(4), 465–488. <https://doi.org/10.1007/s11558-014-9212-6>
- Anderson, L. B., & Guo, J. (2020). Paradoxical timelines in Wells Fargo's crisis discourse: Expanding the discourse of renewal theory. *International Journal of Business Communication*, 57(2), 212–226. <https://doi.org/10.1177/2329488419882761>
- Barth, T. (2010). Crisis management in the Catholic Church: Lessons for public administrators. *Public administration review*, 70(5), 780–791. <https://doi.org/10.1111/j.1540-6210.2010.02205.x>
- Botan, C. H., & Taylor, M. (2004). Public relations: State of the field. *Journal of Communication*, 54(4), 645–661. <https://doi.org/10.1016/j.pubrev.2012.09.002>
- Boys, S. (2009). Inter-organizational crisis communication: Exploring source and stakeholder communication in the Roman Catholic clergy sex abuse case. *Rhetorical and Critical Approaches to Public Relations*, 290–309.

- Catholic Church Child Sexual Abuse Scandal (2019, February 26). *Catholic Church child sexual abuse scandal*. Archived at <https://web.archive.org/web/20200208094242/https://www.bbc.com/news/world-44209971>
- Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, 10(3), 163–176. <https://doi.org/10.1057/palgrave.crr.1550049>
- Coombs, W. T. (2009). Conceptualizing crisis communication. *Handbook of risk and crisis communication*, 99–118.
- Curley (n.d.). *Communication in a Time of Crisis*. Retrieved from <http://theleadershiproundtable.org/churchepedia/communications/parish-communication.html>
- Dokecki, P. R. (2004). *The clergy sexual abuse crisis: Reform and renewal in the Catholic community*. Georgetown University Press.
- Donnelly, S., & Inglis, T. (2010). The media and the Catholic Church in Ireland: Reporting clerical child sex abuse. *Journal of Contemporary Religion*, 25(1), 1–19. <https://doi.org/10.1080/13537900903416788>
- Fuller, R. P., Ulmer, R. R., McNatt, A., & Ruiz, J. B. (2019). Extending discourse of renewal to preparedness: Construct and scale development of readiness for renewal. *Management Communication Quarterly*, 33(2), 272–301. <https://doi.org/10.1177/0893318919834333>
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldire.
- Green, E. (2019, February 14). *Why does the Catholic Church keep failing on sexual abuse?* Archived at <https://web.archive.org/web/20190214145319/https://www.theatlantic.com/politics/archive/2019/02/sean-omalley-pope-francis-catholic-church-sex-abuse/582658/>
- Howard-Payne, L. (2016). Glaser or Strauss? Considerations for selecting a grounded theory study. *South African Journal of Psychology*, 46(1), 50–62. <https://doi.org/10.1177/0081246315593071>

- Hurst, D. (1995). *Crisis and renewal: Meeting the challenge of organisational change*. Harvard Business School Press.
- Keenan, M. (2013). *Child sexual abuse and the Catholic Church: Gender, power, and organizational culture*. Oxford University Press.
- Kirchgaessner, S. (2015, November 3). *Vatican hit by new claims of financial mismanagement and lavish spending*. Archived at <https://web.archive.org/web/20151104200751/https://www.theguardian.com/world/2015/nov/03/vatileaks-scandal-deepens-resistance-to-papal-reform>
- Leadershiproundtable.org. (n.d.) *Standards for Excellence*. Archived at <https://web.archive.org/web/20180831160146/http://theleadershiproundtable.org/sfx/about-the-standards/default.asp>
- Maier, C. T. (2005). Weathering the storm: Hauser's Vernacular Voices, public relations and the Roman Catholic Church's sexual abuse scandal. *Public Relations Review*, 31(2), 219–227. <https://doi.org/10.1016/j.pubrev.2005.02.017>
- Manzie, V. D. (2018). Applying the rhetoric of renewal model in a contemporary African context: Lessons learned from the royal Dutch shell oil crisis in Nigeria. *Journal of International Crisis and Risk Communication Research*, 1(2), 201–224. <https://doi.org/10.30658/jicrcr.1.2.2>
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation* (3rd ed.). John Wiley and Sons.
- Robinson, W. V. (2002, January 31). *Scores of priests involved in sex abuse cases*. Archived at <https://web.archive.org/web/20200310043537/https://www.bostonglobe.com/news/special-reports/2002/01/31/scores-priests-involved-sex-abuse-cases/kmRm7JtqBdEZ8UFoucR16L/story.html>
- Seeger, M. W., & Griffin Padgett, D. R. (2010). From image restoration to renewal: Approaches to understanding postcrisis communication. *The Review of Communication*, 10(2), 127–141. <https://doi.org/10.1080/15358590903545263>
- Seeger, M. W., & Ulmer, R. (2002). A post-crisis discourse of renewal: The cases of Malden Mills and Cole Hardwoods. *Journal of Applied Communication Research*, 30(2), 126–142. <https://doi.org/10.1080/00909880216578>

- Spaulding, C. (2016). Applying the devotional–promotional model to the video game “Faithful.” *Public Relations Review*, 42(2), 359–365. <https://doi.org/10.1016/j.pubrev.2016.01.004>
- Spaulding, C. (2018). Evangelical Christian crisis responses to same-sex sex scandals. *Journal of Media and Religion*, 17(1), 28–40. <https://doi.org/10.1080/15348423.2018.1463717>
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research techniques*. Sage Publications.
- Thompson, B., Jerome, A. M., Payne, H. J., Mazer, J. P., Kirby, E. G., & Pfohl, W. (2017). Analyzing postcrisis challenges and strategies associated with school shootings: An application of discourse of renewal theory. *Communication Studies*, 68(5), 533–551. <https://doi.org/10.1080/10510974.2017.1373370>
- Tilson, D. J., & Venkateswaran, A. (2006). Toward a covenantal model of public relations: Hindu faith communities and devotional–promotional communication. *Journal of Media and Religion*, 5(2), 111–133. https://doi.org/10.1207/s15328415jmr0502_3
- Ulmer, R. R., Seeger, M. W., & Sellnow, T. L. (2007). Post-crisis communication and renewal: Expanding the parameters of post-crisis discourse. *Public Relations Review*, 33(2), 130–134. <https://doi.org/10.1016/j.pubrev.2006.11.015>
- Ulmer, R. R., & Sellnow, T. L. (2000). Consistent questions of ambiguity in organizational crisis communication: Jack in the Box as a case study. *Journal of Business Ethics*, 25(2), 143–155. <https://doi.org/10.1023/A:1006183805499>
- Ulmer, R. R., & Sellnow, T. L. (2002). Crisis management and the discourse of renewal: Understanding the potential for positive outcomes of crisis. *Public Relations Review*, 28(4), 361–365. [https://doi.org/10.1016/s0363-8111\(02\)00165-0](https://doi.org/10.1016/s0363-8111(02)00165-0)
- Wastell, D. G., McMaster, T., & Kawalek, P. (2007). The rise of the phoenix: Methodological innovation as a discourse of renewal. *Journal of Information Technology*, 22(1), 59–68. <https://doi.org/10.1057/palgrave.jit.2000086>
- Xifra, J. (2008). Soccer, civil religion, and public relations: Devotional–promotional communication and Barcelona Football Club. *Public Relations Review*, 34(2), 192–198. <https://doi.org/10.1016/j.pubrev.2008.03.005>

- Xu, S. (2018). Discourse of renewal: Developing multiple-item measurement and analyzing effects on relationships. *Public Relations Review*, 44(1), 108–119. <https://doi.org/10.1016/j.pubrev.2017.09.005>
- Yang, A., & Taylor, M. (2014). Looking over, looking out, and moving forward: Positioning public relations in theorizing organizational network ecologies. *Communication Theory*, 25(1), 91–115. <https://doi.org/10.1111/comt.12049>



Managing Stakeholder Expectations in a Politically Polarized Society: An Expectation Violation Theory Approach

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ABSTRACT

In a polarized society, organizations are increasingly forced to take sides on controversial corporate social responsibility (CSR) issues. In recent years organizations have been challenged for their wrongdoings, inactions, or misinterpretations of societal expectations, which have drawn questions about their CSR efforts. The current study draws upon expectation violation theory to examine how stakeholders' expectations for an organization's CSR efforts and their observed accountability for those CSR efforts influence two aspects of expectancy violations—violation importance and violation expectedness—while controlling for stakeholders' perceived reputation of an organization and political ideologies. Survey findings indicate that stakeholders' perceptions of an organization's reputation and accountability indeed lead to favorable evaluations of an organization's crisis response. Furthermore, the effect of stakeholders' expectations for an organization's CSR efforts is moderated by stakeholders' political ideologies. These findings broaden expectation violation theory to include new variables in the context of CSR efforts that become closely associated with political issues.

KEYWORDS: CSR, social-mediated crisis, stakeholder relationship management, cancel culture

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As governments around the globe are fraught with political gridlock, stakeholders are increasingly turning to corporations to address pressing social and political issues. Subsequently, corporations are challenged with staying abreast of stakeholders' expectations for their involvement in social and political issues. The global refugee and immigration crisis is an example where stakeholders are expecting corporations and other institutions to act (De Zúñiga et al., 2014). Indeed, a corporation's planned involvement in such an issue typically falls under the purview of corporate social responsibility (CSR); yet, corporations can also become inadvertently involved in such issues when their actions are perceived as being associated with an issue. If those actions violate stakeholders' expectations, a crisis may ensue. Yet, we know little about how stakeholders' expectations interact in the context of an organizational crisis.

This study contributes to the literature by examining how stakeholders' evaluations of a corporation's involvement in an issue are influenced by their expectations. Rather than studying stakeholders' attribution of blame or how a crisis threatens a corporation's reputation, our focus is on stakeholders' expectations. Drawing from expectation violation theory (Burgoon, 1993), we construct a framework to understand how stakeholders' CSR expectations influence their evaluations of a corporation's response to violations of their expectations. We consider, as other studies suggest, that a corporation's reputation and perceived accountability for its actions can interact and influence how stakeholders evaluate the corporation's crisis response. Additionally, we recognize that CSR issues are often politicized, especially in the U.S. Thus, we examine how stakeholders' political ideology influence their evaluations of a corporation's crisis response.

This study begins by drawing on crisis communication scholars' theorizing about the complexities of challenge crises (Coombs & Holladay, 2002). This review presents the need to further consider stakeholders' expectations, specifically their CSR expectations, in challenge crisis research. We then turn to expectation violation theory (EVT) as a framework for such consideration and propose a set of hypotheses to investigate how stakeholders' CSR expectations, a corporation's reputation, stakeholders' perceived

accountability for a corporation's actions, and stakeholders' political ideology interact in ways that impact their crisis response evaluations. The hypotheses are then tested using survey data from a national sample, and results and implications for theory and practice are discussed.

Stakeholders, Crises, CSR, and Expectations

Freeman (1984) defined stakeholders as “any group or individual who can affect or is affected by the achievement of the firm's objectives” (p. 53). Stakeholder theorists have long maintained the view that corporations need to effectively manage the demands of external stakeholders such as consumers, community activists, advocacy groups, religious organizations, and NGOs, while emphasizing the demands of internal stakeholders such as shareholders and employees (Freeman, 1984). Accordingly, Freeman argued that a corporation's success depends on its capacity to negotiate, balance, and satisfy the expectations of internal and external stakeholders. When a corporation does not satisfy those expectations, a crisis can ensue.

Crises and Challenge Crises

All corporations are threatened by the potential of a crisis that can range in its type and severity (Coombs, 2012). A crisis is the “perception of an unpredictable event that threatens important expectancies of stakeholders and can seriously impact an organization's performance and generate negative outcomes” (Coombs, 2012, pp. 2–3). Crises often involve a series of rapidly evolving incidents that bring about negative emotions and stresses affecting various stakeholders.

Coombs and Holladay (2002) identified 13 types of crises. Among them, a “challenge crisis” originates from “confrontations by disgruntled stakeholders claiming an organization is operating in an inappropriate manner” (p. 170). Unlike other crisis types, a challenge crisis is not caused by an event; rather, stakeholders' claims about a corporation's socially irresponsible or immoral behavior may instigate a challenge crisis (Coombs & Holladay, 2015). Challenge crises have been discussed in relation

to paracrisis, which refers to “a publicly visible crisis threat that charges an organization with irresponsible or unethical behavior” (Coombs & Holladay, 2012, p. 409). A mismanaged paracrisis can escalate into a full-blown challenge crisis.

Challenge Crises and CSR

A corporation can experience a challenge crisis when it violates stakeholders’ CSR expectations for an issue. A corporation’s CSR efforts are the set of actions that aim to further social good, beyond the explicit pecuniary interests of corporations (Carroll, 1999). Corporations engage in CSR to proactively or reactively respond to stakeholders’ concerns and demands in order to function sustainably in contemporary society. CSR communication is a communication strategy that allows organizations to respond to changes in the turbulent business environment, such as changing stakeholder CSR expectations, societal standards, and media attention. When conceptualized in this light, CSR communication can be understood as a dialogue between corporations and stakeholders that is not static, routinized organizational communication (Eisenegger & Schranz, 2011).

Stakeholders’ expectations are beliefs of what they expect and can profoundly influence decisions. CSR expectations are stakeholders’ beliefs of how much responsibility corporations have on different social issues. That is, “when CSR becomes integrated into the corporate reputation and become a public expectation, perceptions of social irresponsibility become a reputational threat” (Coombs & Holladay, 2015, p. 145). Stakeholders who claim a social grievance against a corporation may challenge a corporation’s social performance because their CSR expectations were violated.

A key trigger of challenge crises is the mismatch between corporations’ policies, strategies, and actions, as well as stakeholders’ expectations for socially responsible behaviors. Zhao and associates’ (2014) analysis of 309 publicized crises found that, for decades, multinational corporations have taken advantage of developing countries’ flawed institutional systems and low CSR expectations, and applied CSR standards that are lower than standards

in developed countries. These corporations have profited through such practices without drawing much criticism because their CSR practice was consistent with stakeholders' expectations.

Indeed, in different countries, stakeholders prioritize different issues or aspects of issues. For instance, Zhao et al. (2014) showed that a mismatch between corporations' outdated CSR standards and stakeholders' expectations can trigger challenge crises. Golob and Bartlett (2007) compared CSR reports from Australian and Slovenian corporations and found considerable differences in what social issues stakeholders and organizations chose to prioritize. Similarly, D. Kim et al. (2010) found that "climate change" is a key concern in Europe and North America, while stakeholders in Asian countries tend to be concerned about "resources/waste management." Nonetheless, with new social monitoring mechanisms and raising consumers' CSR expectations in emerging markets, companies are increasingly faced with challenge crises.

Still, as Freeman (1984) claimed, organizations depend on stakeholders for survival. Therefore, an important goal of an organization's crisis communication efforts is to effectively communicate with stakeholders and ensure their positive evaluation of the organization's crisis response and reputation. By knowing the extent to which stakeholders attribute the crisis to an organization, communicators can employ the appropriate response strategies for assuaging reputational threat or bolstering their organization's crisis response strategy. Yet, there is more to understand about crises than stakeholders' attributions. Previous studies suggest that stakeholders' expectations are significant factors that influence how stakeholders evaluate a crisis (S. Kim, 2014). S. Kim found that stakeholder expectations and stakeholders' OPR relational satisfaction level predict the valence of their negative responses to organizations in crisis. While previous research has discussed expectations, few have made it the focus.

We assert that crisis communication needs a more complete understanding of stakeholders' expectations. Given the connection between a crisis and the violation of stakeholder expectations, this study draws on expectation violation theory to understand how stakeholders' expectations influence their evaluation of corporate crisis responses.

Expectation Violation Theory and Stakeholder Expectations

Businesses operate in complex social and political environments and must consider a variety of stakeholders' expectations. Expectation violations theory offers a framework to begin to more fully understand the role of stakeholders' expectations in crises.

Expectation Violation Theory

Expectancy Violations Theory (EVT) was developed to understand and predict how individuals may respond to unexpected behaviors (Burgoon, 1993). The theory begins by defining expectations as "an enduring pattern of anticipated behavior" (Burgoon, 1993, p. 31). EVT argues that individuals' behaviors are guided by norms and values, which we expect others to follow. An expectation violation can cause cognitive arousal that help individuals to cope with others' unexpected behaviors (Afifi & Metts, 1998). EVT specifies that when an expectation violation occurs, individuals may first give greater attention to the unexpected behavior. Individuals then process and cope with the expectation violation through an interpretation and evaluation stage. This evaluation stage helps individuals to understand the nature of transgression and how to proceed with future behaviors.

Applied to this study, the same norms and values that guide one's socially responsible behaviors are also the norms and values that one would expect corporations to follow. However, when a behavior differs from what is expected, an expectation violation occurs. In an incident that involves violations of CSR values, stakeholders may first pay attention to the unexpected corporate behaviors then evaluate the transgressing corporations. Importantly, this conceptualization positions the violation of stakeholders' expectations as the impetus for a crisis.

While EVT began in the field of interpersonal communication, the theory has been applied in a number of communication fields including computer-mediated communication and public relations (Bevan et al., 2014; Olkkonen & Luoma-aho, 2015). Dewan and Jensen (2019) applied EVT to examine how a scandal shapes the effect of social status in labeling of an alleged violation of rules and norms. The study found that organizational status is likely to

be a liability rather than an asset when alleged violation is part of a more widespread scandal.

EVT holds the potential to offer great insights for crisis communication because, as noted above, previous crisis research has widely identified expectation violation as a critical component (Zhao et al., 2014). EVT helps to specify the types of expectation violations and other related factors. This framework helps to examine expectation violation-related issues and can be valuable for social expectation-related crises such as CSR-related challenge crises.

Afifi and Metts (1998) extended EVT by introducing three dimensions of expectation violations. First, *violation valence* refers to the extent to which a behavior is seen as positive or negative. A negative violation is an unfavorable event that is not consistent with social norms or past interactions. In contrast, a positive violation refers to behaviors that exceeded expectations. A positive violation is a communication occurrence that is viewed favorably, even more so than mere conformity of expectations. Second, *violation expectedness*, which refers to the magnitude the behavior differs from the range of expected behaviors. For instance, in the context of computer-mediated communication, Bevan et al. (2014) found that when users are unfriended on Facebook, users assessed the magnitude of the violations based on the closeness, importance, and length of the friendship, but also by the behaviors of how the unfriender used Facebook. A negative violation with a high magnitude may be especially detrimental to relationships and lead to unfavorable evaluations. Finally, *violation importance* turns the focus to the relational aspects of a violation by considering the importance of the relationships and the impact that the violation will have on the relationship between the violator and violated. Next, we use EVT to extend our understanding of stakeholders' evaluations of corporate responses.

Applying EVT to Stakeholders' Expectations in a Challenge Crisis

The three concepts identified by Afifi and Metts (1998) help to explain the extent to which stakeholders may negatively evaluate

a corporation's crisis response. Provided that organizations in a crisis would only find themselves challenged by stakeholders with violated expectations, this study does not examine *violation valence*. Instead, we focus on variables that may affect stakeholders' *violation importance* and *violation expectedness*. We assert that stakeholders' perceptions of a corporation's reputation and accountability can be understood as manifestations of *violation expectedness* and stakeholders' CSR expectations and political ideologies to be proxies of *violation importance*.

Violation expectedness and reputation. EVT suggests that individuals' expectations for how others will behave is guided by their certainty others will follow a set of norms and values. Violation expectedness captures the degree to which one's behavior is counter to the anticipated behavior (Olkkonen & Luoma-Aho, 2015). When one is highly certain of another's behavior but the other does not actually meet those expectations, the magnitude of the violation expectedness is increased.

Stakeholders set expectations for how an organization will behave based on an organization's reputation. Reputation can be understood as an estimate or evaluation that stakeholders have about an organization's behaviors. A firm's reputation gives stakeholders some certainty for how likely it will follow a set of norms and values. Violations of expected organizational behaviors can adversely affect relationship quality by increasing uncertainty of what to expect in the future (Bevan et al., 2014).

In the context of organizational crisis, reputation is the concept that is most frequently associated with stakeholders' expectations (Olkkonen & Luoma-aho, 2015). Reputation influences stakeholders' evaluations of an organization's crisis response. Organizations with prior negative reputations are usually more often blamed with greater crisis responsibility for the same crisis in comparison to an unknown organization or an organization with a positive reputation (Coombs & Holladay, 2012). This is likely because stakeholders with negative organizational reputation assessments have more uncertainty about an organization. In other words, transgressing behaviors from corporations with bad reputations are more likely to be considered as "behaviors that signal a lack of confidence in

the viability of the relationship, cause relational trauma or lead directly to the termination of the relationship” (Afifi & Metts, 1998, p. 377). Based on EVT and previous crisis communication literature, it is reasonable to predict:

Hypothesis 1: Stakeholders’ perception of an organization’s reputation positively influences their evaluation of the organization’s crisis response.

Violation expectedness and perceived accountability. Accountability refers to the implicit or explicit expectation that organizations who fail to provide a satisfactory justification for their actions will suffer negative consequences (Brennan & Solomon, 2008). Whereas uncertainty about the future may adversely influence perceptions about the corporation’s reputation, knowing that the corporation is being held accountable may offer stakeholders’ certainty about the future. In other words, it is possible that accountability mitigates expectation violations by increasing the certainty stakeholders have about a corporation’s future behaviors.

While accountability has roots in accounting and management (Brennan & Solomon, 2008), CSR scholars have either narrowly considered accountability as being accountable to shareholders or have conflated the term with transparency. On one hand, scholars have recognized the importance of corporate accountability to a wide range of stakeholders (Brennan & Solomon, 2008). Lim and Greenwood (2017) argued that “stakeholder engagement in the process of CSR communications is the best way to ensure accountability” (p. 774). On the other hand, some CSR scholars have assumed accountability derives from transparency (Bachmann et al., 2015). Yet transparency refers to “the disclosure of relevant information about the organization’s decision-making processes, procedures, functioning and performance to stakeholders and the wider public” (Bachman et al., 2015, p. 1133). Accountability goes beyond mere transparency, and implies that a corporation is being held responsible for its actions.

We assert that when stakeholders perceive that a corporation is being held responsible for its actions, whether that is from stakeholders or society in general, that reduces stakeholders’ uncertainty for future behaviors. During crises, corporations that demonstrate

a capacity to engage stakeholders, be held responsible for their mistakes or violation of acceptable behavior, and are willing to take actions, may be seen as being accountable. Especially during crises, being accountable or acting in accountable ways may be an important mechanism to mitigate stakeholders' uncertainty. In other words, informed by EVT, accountability could reduce the uncertainty in violation expectedness and, therefore, lead to more favorable evaluation of corporate behaviors:

Hypothesis 2: Stakeholders' perception about an organization's accountability positively influences their evaluation about the organization's crisis response.

Violation importance and CSR expectations. Afifi and Metts (1998) argued that violations also differ in the degree to which the violations are considered important by the various stakeholders. They recognized that not all stakeholders assign the same level of importance to all violations. In the context of CSR, some stakeholders may not find a particular CSR issue (i.e., sustainable supply change) as important; therefore, an expectation violation would not produce a strong reaction. Yet, it is necessary to recognize that many CSR stakeholders may actually be issue publics, who "may not have mastery over a wide range of political issues but rather are specialists who are passionately concerned with particular issues on the basis of their values, identities, and interest" (Y. M. Kim, 2009, p. 255). If a stakeholder considers certain CSR issues (e.g., animal rights, gender equality, etc.) important, it is likely a corporate violation in these areas would produce strong reactions from this stakeholder. Drawing from EVT's conceptualization of violation importance, we posit that greater stakeholder importance of a CSR issue will negatively influence stakeholders' evaluations of the transgressing corporation's crisis response.

Hypothesis 3: Stakeholders' importance of a CSR issue will be negatively related to stakeholders' evaluation of the transgressing organization's crisis responses.

Violation importance and the moderating role of political ideology. Political ideology refers to a set of political beliefs about the

proper order of society and how it can be achieved (Feldman & Johnston, 2014). Political consumerism refers to the act of making purchase decisions based on ethical or political considerations. Through political consumerism, stakeholders can express their political ideologies and engage in lifestyle-oriented politics. For instance, stakeholders' perceptions of companies' CSR-related misconduct often leads to political consumerism actions (De Zúñiga et al., 2014). Additionally, people with different political ideologies may form different evaluation about issues.

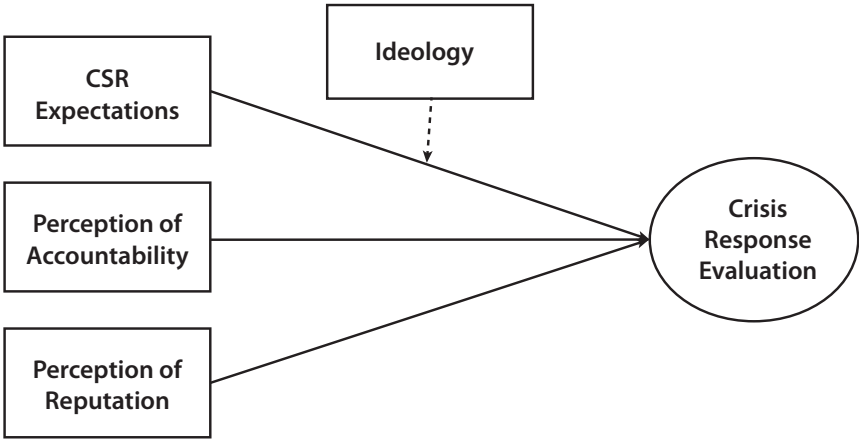
In other words, we believe political ideology may affect stakeholders' perceptions of violation importance. EVT maintains that what counts for expected norms and values differ from person to person (Afifi & Metts, 1998). Among different values and norms, stakeholders' political ideology may be a strong influence on evaluations about politicalized issues. Also, CSR issues often can be politicalized (Scherer & Palazzo, 2011). As CSR issues become politicalized, one factor that may exert a considerable moderating effect on stakeholders' CSR expectations is stakeholders' political ideologies. Political ideologies serve the function to describe or interpret the world "by making assertions or assumptions about human nature, historical events, present realities, and future possibilities" and "to envision the world as it should be, specifying acceptable means of attaining social, economic, and political ideals" (Jost et al., 2009, p. 309).

In other words, when it comes to specific CSR issue areas, people with different ideology may have different *violation expectedness* (Afifi & Metts, 1998).

Hypothesis 4: Stakeholders' political ideology moderates the relationship between stakeholders' CSR expectation and stakeholders' evaluation of an organization's crisis response.

To summarize the conceptual model guiding this study (see Figure 1), *violation importance*, or how important do stakeholders believe the transgression is, can be understood operationally by measuring stakeholders' CSR expectations and political ideology; whereas *violation expectedness*, or to what degree stakeholders expect the transgression to happen, can be observed through stakeholders' perceived accountability and reputation.

FIGURE 1 The Hypothesized Model



Case Description

On January 28, 2017, after President Donald Trump announced an executive order banning travelers from seven Muslim-majority countries, the New York Workers Alliance called out to their taxi drivers to avoid the John F. Kennedy Airport (JFK Airport) for an hour, as an act to stand against the travel ban. Around the same time, Uber announced on Twitter that it canceled its price surge around the JFK Airport, which is a feature that increases ride costs at a time of high demand. The act soon received backlash from angry social media users. Uber was accused of profiting from the protest. A Twitter hashtag #deleteuber broke out calling for customers to boycott Uber (Isaac, 2017). People started posting screenshots on their social media accounts of deleting their Uber accounts, and many celebrities like Janelle Mon  e, Taraji P. Henson, Jesse Tyler Ferguson, and George Takei also joined in the online protest against Uber. According to the *New York Times* (Isaac, 2017), at least 200,000 accounts were deleted.

Uber immediately responded by stating their intentions were only to serve their customers and they were misunderstood by the public. Uber CEO Travis Kalanick also came out against the travel ban by calling it “unjust” on his Facebook page and announced

that the company will contribute \$3 million to help their drivers affected by the immigration ban and provide them with 24/7 legal assistance. However, those acts did not appease the social media consumer activism when some called out that Kalanick was actually sitting on Trump's advisory committee. Kalanick stepped down from Trump's council one week later (Isaac, 2017).

Method

Sample and Procedure

Upon the approval of the Institutional Review Board (IRB), an online survey was conducted via the research firm Survey Sampling International (SSI) via (<http://www.surveysampling.com>) in May 2017. SSI provides access to millions of Internet users from diverse demographic backgrounds who voluntarily participate in online studies for various rewards offered by SSI. To achieve a representative sample, we instructed SSI to use random sampling strategies to solicit respondents, and received 1,060 completed responses (average completion time = 21 min). Before participants started the survey, they read a news story about the #deleteUber incident. An attention check question was placed immediately after the story to ask which company made a donation to the American Civil Liberties Union. Participants with wrong answers were directed toward the end of the survey. This step is taken to ensure participants were fully aware of the incident and has the information to assess Uber's crisis response. In the end, there were 687 valid questionnaires.

The participants' average age was 44.92 ($SD = 17.11$). Further, 44.3% of participants were males, 55.3% were female, and 3% indicated being gender fluid. Most participants had either a high school (37.8%) or bachelor's (32.5%) degree. Participants' median income was reported as \$40,000 to \$59,000. This sample closely resembles that of the 2010 U.S. census data.

Measures

Table 1 reports the basic statistics for all independent variables.

TABLE 1 Means, Standard Deviations, and Correlations for Independent Variables

	M	SD	1	2	3	4
1. Refugee/Immigrant CSR Expectations	3.858	1.630	—	—	—	—
2. Ideology	3.738	1.670	.349**	—	—	—
3. Uber Accountability	4.235	1.732	.107**	.192**	—	—
4. Perception of Uber's Reputation	4.018	1.318	.206**	.239**	.305**	—
* $p < .05$, ** $p < .01$, *** $p < .001$						

Perception of Uber's reputation. Following Huang et al. (2014), we asked participants to indicate the degree (7-point scale) to which they agree with four statements such as “I have a better impression of Uber” and “I think Uber has a good overall image.” The four items were combined into one variable (Cronbach's $\alpha = .905$; $M = 4.018$, $SD = 1.318$).

Immigrant/refugee related CSR expectations. To measure this variable, we asked four questions on a 7-point scale such as “Do you think companies should make an effort to support immigrants or refugees” and “Companies should donate part of their products and services to support immigrants or refugees.” The four items were combined into one variable (Cronbach's $\alpha = .954$; $M = 3.858$, $SD = 1.630$).

Perception of Uber's accountability. Without any known established measure of accountability, we used a single item to assess stakeholders' perception about Uber's accountability on the company's action during the incident on a 7-point bi-polar scale (accountable-unaccountable). This variable is reverse coded ($M = 4.235$, $SD = 1.732$).

Political ideology. Participants' ideologies were assessed by asking them to rate themselves on a 7-point scale (1 = very liberal; 7 = very conservative) in terms of economic ($M = 3.849$, $SD = 1.750$) and social issues ($M = 3.638$, $SD = 1.763$). The two

items were combined into one variable (Cronbach's $\alpha = .897$; $M = 3.738$, $SD = 1.670$).

Stakeholders' overall evaluation of Uber's crisis response. This is the dependent and latent variable and two sets of measures were used: perception of Uber's crisis responsibility and evaluation of Uber's crisis response strategies. These two set of measures capture different dimensions of stakeholders' evaluation of crisis response. First, to assess participants' perception of Uber's crisis responsibility, we asked participants to indicate how much responsibility Uber bears on a 7-point bipolar scale. This included two items: "not at all responsible" to "totally responsible" and "not at all to be blamed" to "absolutely to be blamed." The two items were combined into one variable (Cronbach's $\alpha = .887$; $M = 4.112$, $SD = 1.714$). Further, following H. J. Kim and Cameron (2011), we asked participants to indicate their impression about the organization's response strategies to the incident on a 7-point bipolar scale that include the following six items (see Figure 2 for items 1 to 6): sincere—insincere, trustworthy—untrustworthy, honest—dishonest, believable—unbelievable, experienced—inexperienced, and expert—not expert. In order to identify the most relevant items, exploratory factor analysis was conducted.

In the hypothesized model, evaluation about Uber's response strategies and responsibility level were used to indicate stakeholders' overall evaluation of Uber's crisis response.

Data Analysis

Structural equation modeling, with maximum likelihood method of estimation, was implemented with the Lavaan program in R. The analysis took two steps. The first step considers the factor structure of stakeholders' crisis evaluation. Confirmatory factor analyses were implemented to validate the multidimensional measurement of this latent variable. The second step involves a comprehensive model that includes all variables. Model fit indices specify whether the difference between the observed and the reproduced covariance matrices are due to chance. This study relies on comparative fit index (CFI) and the root mean square error of approximation

(RMSEA) to assess model fit. This is because a method such as χ^2 is very sensitive to sample size (Keith, 2014). A small difference between a hypothesized model and sample data can result in exponential increase in the χ^2 statistics. Given the sample size of the current study, it is more appropriate to use other fit indicators.

Results

The comprehensive model (see Figure 2 and Table 2) has a good model fit (CFI = .941 and RMSEA = .069). Very good model fit is indicated by a CFI of .95 or higher and an RMSEA of .08 or less (Keith, 2014). Thus, the hypothesized model is tenable with the data used in this study. In the estimated model (see Figure 2), stakeholders' perception about Uber's reputation positively influences their evaluation about Uber's crisis response ($\beta = .394$, $p < .001$), and hypothesis 1 was supported. Further, stakeholders' expectations about Uber's accountability positively influences their evaluation about Uber's crisis response ($\beta = .497$, $p < .001$); thus, hypothesis 2 was supported.

FIGURE 2 The Fitted Model

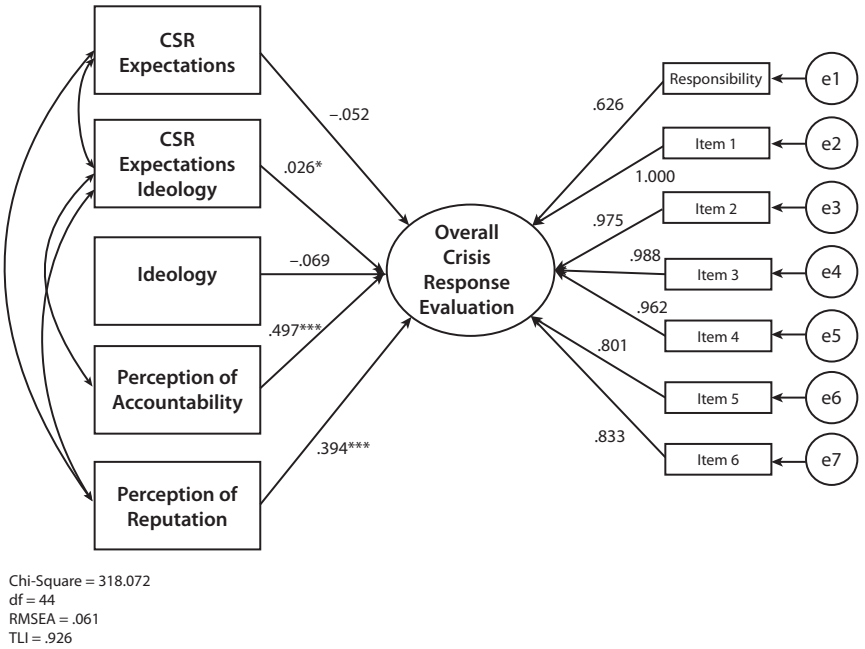


Table 2 Fit Indexes for Models

Models	χ^2	<i>df</i>	RMSEA	CFI	$\delta\chi^2$	δdf
Model 1 (With Interaction effect)	318.072	44	.069	.941		
Model 2 (Without Interaction effect)	292.002	38	.103	.945		
Difference between Model 1 and 2					26.070***	6
* $p < .05$, ** $p < .01$, *** $p < .001$						

In the fitted model, there is no significant relationship between stakeholders' CSR expectations and the refugee/immigrant issue and their evaluation of Uber's crisis response ($\beta = .069$, $p = \text{n.s.}$), and no significant relationship between political ideology and stakeholder's crisis evaluation ($\beta = .052$, $p = \text{n.s.}$). However, the interaction effect between stakeholders' political ideology and CSR expectations produced significant results ($\beta = 0.026$, $p < .05$), suggesting a moderation effect. Overall, more liberal stakeholders tend to evaluate Uber's response lower (mean = 3.968) whereas more conservative stakeholders tend to evaluate Uber's response higher (mean = 4.364). To further test the moderation effect, we examined if the two variables significantly influence the dependent variable without the moderation effect. As such, we fitted Model 2 without the interaction effect. The comparison of model fit between Model 1 (with interaction effect) and Model 2 (without interaction effect) can be found in Table 2. Model 2 did not achieve a good fit ($\chi^2 = 292.002$, $df = 38$, $p < .00$; CFI = .945; RMSEA = .103). Notably, without the interaction effect (Model 2), stakeholders' CSR expectations ($\beta = .05$, $p < .05$) and political ideology ($\beta = .03$, $p < .05$) significantly influence stakeholders' evaluations of Uber's crisis response, which further confirms a strong moderation effect as predicted in hypothesis 4. This is because the effect of a moderating variable is statistically demonstrated through interaction. While Model 2 showed that the two variables are significant, the inclusion of the interaction affected the strength of these two variables on the dependent variable. As such, we conclude that hypothesis 3 is partially supported and hypothesis 4 is supported.

Discussion

The #deleteUber crisis is not a one-off incident. In fact, we suspect organizations will increasingly find themselves in the midst of similar crises in the years to come. As wicked issues continue to plague societies and as governments struggle with political gridlock and rising populism (Head & Alford, 2015), citizens around the world will continue to expect corporations to play prominent roles in addressing social issues.

Exploring the Complexities of Crises

A crisis could arise from a corporation's CSR wrongdoings or inactions that violate stakeholders' expectations of norms and values, or social and political obligations (Coombs & Holladay, 2015). Prior research has primarily studied whether CSR is a reputational asset or liability during crises (Coombs & Holladay, 2015). Our study takes one step further and examines how reputation and other variables interact to influence stakeholders' evaluations of corporate crisis responses. Taking a stakeholder perspective, we applied expectation violation theory (Burgoon, 1993) and, more specifically, Afifi and Metts's (1998) dimensions of expectation violations—violation valance, violation expectedness, and violation importance—to explore the factors that influence stakeholders' evaluations of a corporation's crisis responses. Prior crisis communication research suggests stakeholders' expectations in a crisis inherently produces a negatively valenced condition. Our conceptual model thus focused on the latter two expectation violation dimensions. The model posits that stakeholders' perceptions of an organization's reputation and accountability impact their violation expectedness and stakeholders' CSR expectations on issues. Further, political ideologies influence stakeholders' perceptions of violation importance. Conceptually, our model suggests that violation expectedness and violation importance affect stakeholders' evaluations of a corporation's crisis response. Our data provide empirical evidence to lend support to this model.

Applying Expectation Violation Theory to Crisis Communication

Violation importance. This study postulated that stakeholders' CSR expectations may influence stakeholders' evaluations by influencing the violation importance. Violation importance, which accounts for the impact that the violation will have on the relationship between the violator and violated (Afifi & Metts, 1998), was assessed by considering stakeholders' CSR expectations and political ideologies. The empirical evidence for this hypothesis is less straightforward in the sense that the effect of CSR expectations is moderated by stakeholders' political ideologies. We drew upon EVT and the often-politicalized nature of crises (Scherer & Palazzo, 2011), to suggest that it is likely that stakeholders with liberal and conservative ideologies may embrace different CSR values and thus assign different levels of violation importance to a CSR violation. In other words, what counts as a CSR violation or serious violation may differ along the political ideological fault line. As expected, we found that stakeholders' CSR expectations influence their evaluations of an organization's crisis response and are significantly moderated by their political ideologies.

Given the current political climate, it is likely that more organizations will be challenged by crises that derive from politicized social issues. We did not focus on the ways organizations should handle political issues, but we sought to explore the impact stakeholder's political ideologies might have on their CSR expectations and evaluations of an organization's crisis responses. We found that the price for violating CSR expectations is daunting. Even Uber's former CEO recognized this when he commented on the high price the company has to pay for failing to meet CSR expectations (Isaac, 2017). Based on this finding, we believe that scholars and communication managers should not merely focus on the impact stakeholders' political ideologies have on CSR expectations, evaluations of crisis responses, or an organization's reputation; rather we believe there is a more pressing need to direct attention toward the ways corporations can effectively address the social issues that are the sources of crises.

Indeed, the short-term effects of a crisis may be detrimental to a corporation's reputation, but crises may force corporations to become attuned to stakeholders' expectations or even directly address social issues. Looking at the long term and broader effects, we believe that crises may bring corporations to engage in broad conversations with society and step up to take on more social responsibility. As such, understanding the mechanisms of crises may help prepare organizations for tough challenges ahead and benefit society at large. As corporations navigate this uncharted territory, these crises may motivate corporations to understand and engage with their stakeholders in more dialogic and sophisticated ways. In addition to the theoretical values already discussed, this study has practical implications for communication managers that we discuss in the following section.

Implications

Organizations should better communicate their CSR efforts. Traditionally, corporations have taken a responsive approach to promote their social responsibility (Brennan & Solomon, 2008). Our findings invite us to reconsider the validity of traditional, one-way communication strategies that treat stakeholders merely as consumers of an organization's CSR efforts or crisis responses. Instead, our data suggest that to effectively manage crises, communication managers need to actively engage stakeholders, understand stakeholders' CSR expectations, their political ideologies, and proactively manage CSR issues. We believe that a stakeholder engagement approach to CSR offers corporations, as well as stakeholders, numerous opportunities during a crisis.

First, a stakeholder engagement approach can create the means for communication managers to understand their stakeholders' CSR expectations and political ideologies (De Zúñiga et al., 2014). It is advisable for practitioners to research and understand stakeholders; however, the standard ways corporations research stakeholders do not provide opportunities to understand stakeholders in meaningful ways or allow for a dialogue to occur. A stakeholder engagement approach calls on corporations to regularly and actively incorporate stakeholders into a corporation's

decision-making processes. Understandably, the capacity to enact such recommendation is formidable at first glance; however, we ask communication managers to juxtapose the seemingly daunting task of engaging stakeholders against the threats posed by a crisis. We argue that a stakeholder engagement approach can better position practitioners to understand the intricacies of stakeholders' CSR expectations and political ideologies than traditional approaches to CSR.

Second, corporations should demonstrate their accountability during crises. Our data suggest that when stakeholders perceive a corporation as being accountable during a crisis, their evaluations of the corporation's crisis response is more positive. A stakeholder engagement approach offers an effective and authentic way for corporations to communicate and demonstrate their accountability. In fact, Lim and Greenwood (2017) found that corporations that engage stakeholders in CSR communication are more likely to be perceived as accountable and, therefore, better accomplish business goals. Future studies may look at if the extent and types of business engagement strategies during crises affect perceived corporate accountability.

Limitations and Future Research

Like all studies exploring a new area of the literature, there are some limitations to our findings. Namely, Uber as a company has long been faced with issues ranging from how they pay their drivers to safety concerns for passengers. As such, stakeholders' unfavorable evaluation of this company may have additional causes beyond the #deleteuber crisis. However, we found that a real-life crisis scenario bolstered our study's external validity. Nevertheless, it should be noted that our sample size is relatively small. In comparison to experiments, our survey methods cannot fully control certain factors. Further, since we draw our sample and case from a U.S. context, findings may not be applicable to other countries.

Nonetheless, these findings demonstrate the value of EVT in the context of crisis and introduced new variables to the theory. Future studies may build upon the current research to comprehensively examine the application of EVT in crisis communication.

We call on future researchers to test the model presented here with less well-known companies involved in crisis, and see what concepts stand out in terms of influence level. Finally, limited by the timing of our study, we know little about how organizations can renew after a crisis (Manzie, 2018). CSR crises are violations of stakeholders' expectations for the norms and values of a society (Coombs & Holladay, 2002); thus, the renewal after a crisis may be unique. We believe that future studies can build from the foundation provided by the discourse of renewal literature to explore how corporations can re-establish reputations by meeting stakeholders' CSR expectations.

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References

- Affi, W. A., & Metts, S. (1998). Characteristics and consequences of expectation violations in close relationships. *Journal of Social and Personal Relationships*, 15(3), 365–392. <https://doi.org/10.1177/0265407598153004>
- Bachmann, R., Gillespie, N., & Priem, R. (2015). Repairing trust in organizations and institutions: Toward a conceptual framework. *Organization Studies*, 36(9), 1123–1142. <https://doi.org/10.1177/0170840615599334>
- Bevan, J. L., Ang, P. C., & Fearn, J. B. (2014). Being unfriended on Facebook: An application of expectancy violation theory. *Computers in Human Behavior*, 33(1), 171–178. <https://doi.org/10.1016/j.chb.2014.01.029>

- Brennan, N. M., & Solomon, J. (2008). Corporate governance, accountability and mechanisms of accountability: An overview. *Accounting, Auditing & Accountability Journal*, 21(7), 885–906. <https://doi.org/10.1108/09513570810907401>
- Burgoon, J. K. (1993). Interpersonal expectations, expectation violations, and emotional communication. *Journal of Language and Social Psychology*, 12, 30–48. <https://doi.org/10.1177/0261927X93121003>
- Carroll, A. B. (1999). Corporate social responsibility: Evolution of a definitional construct. *Business & Society*, 38(3), 268–295. <https://doi.org/10.1177/000765039903800303>
- Coombs, W. T. (2012). *Ongoing crisis communication: Planning, managing, and responding* (3rd ed.). Sage.
- Coombs, W. T., & Holladay, S. J. (2002). Helping crisis managers protect reputational assets: Initial tests of the situational crisis communication theory. *Management Communication Quarterly*, 16(2), 165–186. <https://doi.org/10.1177/089331802237233>
- Coombs, W. T., & Holladay, S. J. (2012). The paracrisis: The challenges created by publicly managing crisis prevention. *Public Relations Review*, 38(3), 408–415. <https://doi.org/10.1016/j.pubrev.2012.04.004>
- Coombs, W. T., & Holladay, S. J. (2015). CSR as crisis risk: Expanding how we conceptualize the relationship. *Corporate Communications: An International Journal*, 20(2), 144–162. <https://doi.org/10.1108/CCIJ-10-2013-0078>
- Dewan, Y., & Jensen, M. (2019). Catching the big fish: The role of scandals in making status a liability. *Academy of Management Journal*. <https://doi.org/10.5465/amj.2018.0685>
- De Zúñiga, H. G., Copeland, L., & Bimber, B. (2014). Political consumerism: Civic engagement and the social media connection. *New Media & Society*, 16(3), 488–506. <https://doi.org/10.1177/1461444813487960>
- Eisenegger, M., & Schranz, M. (2011). Reputation management and corporate social responsibility. In Ø. Ihlen, J. L. Bartlett, and S. May (Eds.), *The handbook of corporate social responsibility* (pp. 128–146). John Wiley & Sons, Inc.

- Feldman, S., & Johnston, C. (2014). Understanding the determinants of political ideology: Implications of structural complexity. *Political Psychology*, 35(3), 337–358. <https://doi.org/10.1111/pops.12055>
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Cambridge University Press. <https://doi.org/10.1017/cb09781139192675.003>
- Golob, U., & Bartlett, J. L. (2007). Communicating about corporate social responsibility: A comparative study of CSR reporting in Australia and Slovenia. *Public Relations Review*, 33, 1–9. <https://doi.org/10.1016/j.pubrev.2006.11.001>
- Head, B. W., & Alford, J. (2015). Wicked problems: Implications for public policy and management. *Administration & Society*, 47(6), 711–739. <https://doi.org/10.1177/0095399713481601>
- Huang, C. C., Yen, S. W., Liu, C. Y., & Huang, P. C. (2014). The relationship among corporate social responsibility, service quality, corporate image and purchase intention. *International Journal of Organizational Innovation (Online)*, 6(3), 68–84.
- Isaac, M. (2017, January 31). What you need to know About #DeleteUber. The New York Times. Archived at <https://web.archive.org/web/20170209170430/https://www.nytimes.com/2017/01/31/business/delete-uber.html>
- Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology*, 60, 307–337. <https://doi.org/10.1146/annurev.psych.60.110707.163600>
- Keith, T. Z. (2014). *Multiple regression and beyond: An introduction to multiple regression and structural equation modeling*. Routledge.
- Kim, D., Nam, Y., & Kang, S. (2010). An analysis of corporate environmental responsibility on the global corporate Web sites and their dialogic principles. *Public Relations Review*, 36, 285–288. <https://doi.org/10.1016/j.pubrev.2010.04.006>
- Kim, H. J., & Cameron, G. T. (2011). Emotions matter in crisis: The role of anger and sadness in the publics' response to crisis news framing and corporate crisis response. *Communication Research*, 38(6), 826–855. <https://doi.org/10.1177/0093650210385813>

- Kim, S. (2014). The role of prior expectancies and relational satisfaction in crisis. *Journalism & Mass Communication Quarterly*, 91(1), 139–158. <https://doi.org/10.1177/1077699013514413>
- Kim, Y. M. (2009). Issue publics in the new information environment: Selectivity, domain specificity, and extremity. *Communication Research*, 36(2), 254–284. <https://doi.org/10.1177/0093650208330253>
- Lim, J. S., & Greenwood, C. A. (2017). Communicating corporate social responsibility (CSR): Stakeholder responsiveness and engagement strategy to achieve CSR goals. *Public Relations Review*, 43(4), 768–776. <https://doi.org/10.1016/j.pubrev.2017.06.007>
- Manzie, V. D. (2018). Applying the rhetoric of renewal model in a contemporary African context: Lessons learned from the Royal Dutch Shell oil crisis in Nigeria. *Journal of International Crisis of Risk Communication*, 1(2), 201–224. <https://doi.org/10.30658/jicrcr.1.2.2>
- Olkkonen, L., & Luoma-Aho, V. L. (2015). Broadening the concept of expectations in public relations. *Journal of Public Relations Research*, 27(1), 81–99. <https://doi.org/10.1080/1062726X.2014.943761>
- Scherer, A. G., & Palazzo, G. (2011). The new political role of business in a globalized world: A review of a new perspective on CSR and its implications for the firm, governance, and democracy. *Journal of Management Studies*, 48(4), 899–931. <https://doi.org/10.1111/j.1467-6486.2010.00950.x>
- Zhao, M., Tan, J., & Park, S. H. (2014). From voids to sophistication: Institutional environment and MNC CSR crisis in emerging markets. *Journal of Business Ethics*, 122(4), 655–674. <https://doi.org/10.1007/s10551-013-1751-x>

